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THE LIQUOR QUESTION

A Study of Human Liberty in England

By S. S. McCLURE

IN 1924 the English people spent for liquor $1,500,000,000.

In 1924 the English people spent for milk $375,000,000.

The per capita consumption of milk in England is one-third of that in the United States, and one-sixth of that in Sweden and Switzerland.

The Importance of Milk

The late Dr. L. Emmet Holt, eminent pediatrician, discussing food elements required for growth and development, says in his standard text book, *Diseases of Infancy and Childhood:*

"Milk is the most important, and taxes the organs of digestion the least; no other food in infancy and early childhood can replace it."

Relation of Dairy Products to Health in Parts of Europe

Dr. McCollum of Johns Hopkins, a foremost authority on nutrition, says in his monumental book, *The Newer Knowledge of Nutrition* (Macmillan, 1925):

"In Sweden in 1900 there was approximately one dairy cow to every two inhabitants. A similar relation is held in Switzerland with respect to the development of the dairy industry in relation to population. . . . There are no places in Europe where more hardy and aggressive men and women are to be found than in Scandinavia and Switzerland."

I propose to give data from two great experiments in the relation of milk to health in infants and young children:

The first experiment I shall describe grew out of the World War and showed the effects of milk when rationed to babies and children to the number of many millions.

Health of Babies and Little Children in Germany in the First Year of the War; An Experiment With Millions of Children

I reached Berlin early in January, 1915. I was helped in getting facts about nutrition of children in Germany by Professor von Schultze-Gaevernitz, a member of the Reichstag, a leading liberal who had worked for many years to improve the relations of England and Germany.

The first important visit we made was on Frau Baumer.

Frau Baumer is perhaps the foremost woman in Germany. She is especially active in the organizations that charge themselves with the welfare of babies, nursing mothers and pregnant women.

She explained to us how the milk of Berlin was distributed in such a way that, so far from babies suffering, they were in better condition than in pre-War times.

In ordinary times Berlin consumes daily 1,000,000 liters of milk. The war-time supply in 1915 was 600,000 liters. The needs of pregnant and nursing mothers, babies, and children up to ten or twelve years of age were first met. What was left went to general use. A

similar method was employed all over Germany. The reason for the improved health of German babies during the War, irrespective of the poverty or ignorance of the mother, was that every baby had its proper regimen.

In February, 1915, I spent ten days in Belgium and found that under Mr. Hoover's régimes in that country the same policy was applied, and that infant mortality during 1915 was less than ever before in the history of Belgium.

German Propaganda in America

During the months of February and March I visited not only Belgium but also the Eastern front in Russia, and made a journey to Constantinople, pausing by the way at Budapest and Vienna. On my return to Berlin, I saw in the files of the New York papers that a vigorous campaign against the English blockade was being carried on in the United States by German sympathizers, on the ground that German babies were suffering greatly for lack of milk, and that great efforts were being made to ship milk to Germany.

The German Ambassador, Count Bernstorff, thus describes this attempt in his book (*My Three Years in America*, P. 249, Scribners):

"Among others, a 'Citizens' Committee for Food Shipments' was formed, whose activities spread through the whole country, and were avowedly pro-German. A special function of the Committee, with Dr. von Mach as executive chief, was a month of propaganda throughout the country, with the object of obtaining the means to supply the children of Germany with milk.

"Dr. von Mach succeeded in bringing the matter to the notice of the President, who actively interested himself in it, and promised to see that the milk should pass the English blockade, and reach Germany in safety. Accordingly, the State Department instructed the American Embassy in Berlin to issue a statement."

When I read in the American newspapers of the attacks on the English blockade and of an appeal of a kind to reach peoples' hearts—for, as Von Bernstorff wrote, "this movement was particularly dear to us, because the Americans are most easily won over when an appeal is made to their humanity"—I determined to collect the official statistics, which I knew existed, and thus disprove the assertions of the German propagandists in America.

I spent a great deal of time making a special study of Berlin, with the aid of Frau Baumer and Professor von Schultze-Gaevernitz. Frau Baumer gave me the facts and explained the reasons of the improved health of babies and children. I then went to the department of the city government of Berlin that collects and publishes vital statistics, which showed for the preceding months such a decrease in infant mortality as to prove that never before in the history of Berlin had the death rate of babies been so low.

I got the vital statistics of twenty-six cities of Germany, of 200,000 inhabitants or over, from the Imperial health department, as published February 6, 1915, and in the case of every city the death rate was lower than ever before in the history of Germany.

This condition of affairs was a matter of current and universal knowledge and comment in Germany and was regarded by the officials and the non-official organizations of Germany that devoted themselves to this work as an achievement of extraordinary importance.

On April 20th, 1916, I got from Dr. Breger, President of the Health Insurance of the German Government, a signed statement covering all Germany, as follows:

"The health of the German nation during the war has been excellent. The mortality of infants has decreased. The board of health has published statistics of the large towns, which show a decrease in the birth-rate, but this decrease was in the summer season nearly half compensated by a corresponding decrease of infants' deaths. The infants are now in war-time better taken care of; that is the reason why not so many die now as in peace times. Statistics show: In the twenty-six German large cities (of more than 200,000 inhabitants) in the time from August 1, to October 30, 1915, there are, compared with the absolute numbers of the births and deaths of infants of the same time of the previous year, twenty-six per cent. fewer births, fifty-two per cent. fewer deaths."

German Babies in the Year 1915

Increase and decrease of the absolute numbers of infants born alive and of the deaths in the first year of life in the German twenty-six large cities with more than 200,000 inhabitants in 1915 compared to 1914:

CHILDREN BORN ALIVE

1914	1915	*Decrease*
256,104	206,634	49,470

DEATHS OF INFANTS IN FIRST YEAR OF LIFE

1914	1915	*Decrease*
39,207	28,714	10,493

Consequently the death rate of children under one year in 1914=15.3%

Consequently the death rate of children under one year in 1915=13.9%

In Berlin it works out..1914=15.15%
1915=12.05%

I published these facts in the American newspapers in May, 1916. About the same time there was a report made to the State Department in Washington from the American Embassy in Berlin, which was furnished the facts by the German Government to the same effect.

The German Ambassador in America and the Milk Controversy

Von Bernstorff said: "Meanwhile, the well-known American journalist, McClure, returned from a tour of investigation in Germany, where he had been supported in every way by the German Government departments. He gave a very favorable account of the milk question, as of the feeding of infants in general, and this gave rise to the first disagreeable controversy. Mr. McClure took up an unyielding attitude. Unfortunately, however, the State Department then published an equally favorable report, which, coming from the American Embassy and published with the approval of the Foreign Office in Berlin, caused the complete collapse of Dr. von Mach and the whole movement, which was thus exposed in a most unfortunate light."

I made a special study at Mannheim, where the mayor showed me statistics showing that the children when entering school at the age of six were, on an average, taller and heavier than in any previous years.

I told the mayor that in America it was claimed that infants were dying in Germany on account of lack of milk.

He simply laughed, and showed me the vital statistics and the health statistics of Mannheim. Not only was the mortality rate for infants lower than previously, but the health of the school children was better. This result was achieved, as in the other cities of Germany, by more careful organization.

He referred me to a lady who was one of the three doctors for the Mannheim schools. The other two doctors, her colleagues, were absent, in the army, and this lady was on her honeymoon, but she returned to give me information. She was also editor of a magazine devoted to the health of school children in all Germany. She showed me articles in medical journals discussing the reasons for the improvement of the health of the German people, and especially of the babies. The principal reason was the universal use of milk for babies and children.

The Second Experiment as to the use of Milk With Children of Different Ages

Second, the experiments reported by H. C. Sherman and Edith Hawley (Department of Chemistry, Columbia University, New York) published in the *Journal of Biological Chemistry*, in 1922.

Here is a description of experiments designed to determine the rate of storage of calcium in normal children of different ages and the nature and amount of the intake required to support optimum calcium storage in the growing child.

"The experiments here described were carried out in four series. The purpose of the first series was to study the relation of the calcium retention to age. Twelve children from three to thirteen years old were studied as to balance of intake and output of calcium and phosphorus during a period of nine days. All the children were normal and received a normal mixed diet including a fixed allowance of 750 gm. of milk per child per day. This resulted in a nearly uniform calcium intake of about 1 gm. per child per day. The calcium retention varied from 0.15 to 0.62 gm. per day, increasing with the

age and size of the child. Calculated to the basis of size, the results show fair uniformity and indicate an average daily storage of 0.01 gm. of calcium and 0.008 gm. of phosphorus per kilo of body weight per day in normally growing children of three to thirteen years of age.

In the second series of experiments, three of the children who had served as subjects during the first series were kept under continuous control and observation with quantitative determination of intake and output of calcium and phosphorus for forty-eight days—a series of eight experiments of six days each—the calcium intake being varied from period to period by systematic changes in the amount of milk in the diet, in order to determine what daily allowance of milk would induce optimum storage of calcium in the growing organism of the child. The three children studied in this series were four, five, and twelve years of age, and in each case it was found that the optimum storage of calcium required an allowance of about a quart (750 or 1000 gm.) of milk per child per day. Combining the data of both series, it is found that the average storage of calcium was seventy per cent. higher (0.017 gm. as against 0.010 gm. per kilo of body weight per day) when the daily allowance of milk was increased from 750 to 1,000 gm. per child per day.

"When the food intake included 1,000 gm. of milk per day, the other foods of the mixed diet being taken *ad libitum,* the daily intake of calcium by these normally growing children of four to twelve years averaged 0.053 gm. of calcium per kilo of body weight, and of this intake approximately one-third was retained in the growing body.

"The experiments of the third and fourth series were designed to determine whether children utilize the calcium of vegetables as well as they do that of milk. In Series III the same three children were used as in Series II, and calcium and phosphorus balances were determined continuously for twenty-seven days divided into three experiments of nine days each. During the first and third of these periods each child received 500 gm. of milk per day as the only calcium-rich food of a mixed diet, while during the second period there were added to the diet such amounts of carrots and spinach as would furnish the quantity of calcium which would have been supplied by a second 500 gm. of milk. Had the calcium of the vegetables been utilized as efficiently as that of milk, this would have been equivalent to increasing the daily allowance of milk from 500 to 1,000 gm. and a distinct increase of calcium storage would have resulted as shown by the experiments of Series II. This was found not to be the case. In the final series of experiments three different children were used and the method of comparing the utilization of the calcium of the vegetables with that of milk was modified by using 750 gm. of milk per day in the first and third period, while during the second period one-half of this milk was replaced by enough of the vegetables to furnish the same amount of calcium. Here again it was found that the children utilized the calcium of milk to better advantage than they did the calcium of the vegetables. The writers entertain no doubt as to the desirability of a liberal use of vegetables in the feeding of children, but the vegetables should be used in addition to a liberal allowance of milk, and should not be allowed to reduce the amount of milk consumed.

Summary and Conclusions

"The complete balance of intake and output of calcium (and in most cases also of phosphorus) has been determined in four progressive series of experiments including in all twenty-one children between the ages of three and fourteen years and covering a total of 417 experimental days in 139 experiments of three days each.

"On an ordinary mixed diet containing daily 750 gm. of milk and furnishing a total of 0.74 to 1.02 gm. of calcium per day, children three to thirteen years of age stored 0.15 to 0.62 gm. of calcium per day, the amount being approximately proportioned to the size of the child and averaging 0.01 gm. of calcium per kilo of body weight per day.

"When the daily allowance of milk was increased to 1,000 gm. the storage of calcium was increased. The results obtained indicate that the optimum storage of calcium is made when the diet

contains 1 quart of milk per day for each child. This, with a normal allowance of other foods, will usually mean a daily intake of at least 1 gm. of calcium for the growing child.

"Children do not seem to utilize the calcium of vegetables as efficiently as they do that of milk. In the experiments here reported the calcium balances were more variable and always less favorable when vegetables replaced about half of the milk as a source of calcium.

"In general the conditions influencing the storage of calcium tended to influence that of phosphorus in the same direction; but, as all the experiments here described were planned primarily with reference to calcium, the data for phosphorus are not discussed in corresponding detail.

"The finding here reported, that children from three to thirteen years old require an intake of a gram of calcium per day to induce optimum storage of this element, has an important bearing upon standards for calcium in family dietaries. It has been found that the average requirement for maintenance is 0.45 gm. of calcium per man per day, and it has been customary to allow a margin of fifty per cent. above this actual maintenance requirement, thus making an allowance of 0.68 gm. per day as a 'dietary standard' for calcium. Since the child of three to thirteen years, although eating less food than the man, will need more than 0.68 gm. of calcium in his food to support optimum calcium storage and bone and tooth development, it would seem that a higher dietary standard for calcium, perhaps 1 gm. or more per man per day, would be better in all cases in which the group of people to be fed includes any growing children.

"In view of the results obtained with different foods as sources of calcium, it is desirable also to emphasize the importance of a quart of milk per day for every child, and it would be best to maintain this level of milk intake up to at least the age of twelve to fourteen years."

The conclusions of Professor Sherman and Miss Hawley are identical with those of the work of other experimenters, and represent facts generally accepted.

Facts About Milk by Professor E. V. McCollum Johns Hopkins Medical School, Baltimore, Maryland

Dr. McCollum is the author of a book entitled *The Newer Nutrition,* 3rd edition, McMillan, 1925.

This book—a work of colossal proportions, a veritable bible of health—gives the latest authoritative knowledge as to food and health. I am permitted by the author and the publisher to quote freely, which I do herewith:

"Milk is the most satisfactory single article of food which is suitable for consumption by man.

"It is not an ideal food when taken over a long period as the sole source of nutriment, but is the best one with which nature has provided us.

"It is the one food for which there is no effective substitute.

Milk a Deficiency Food

"Milk is a very effective food for supplementing the deficiencies of other substances such as the cereal grains, tubers and fleshy roots. It is rich in both calcium and phosphorus, and many vegetable foods are relatively poor in both these elements, especially the former. In fact, there are but two classes of foods which are relatively rich in calcium, the principal element in lime, and a prominent constituent of the substance of bone. These are the milks of various animals and the leafy vegetables. All other kinds of foods fall below the nutritive requirements of man and animals in this substance. The body is very sensitive to deviations from the optimal concentration of calcium in the food, and serious damage may easily result to the bone structures if the diet is not properly constituted with respect to this substance.

The Teeth in Rickety Children

"There has been very serious deterioration of the teeth of civilized people in many parts of the world during the last century, especially in parts of England and North America and the British overseas dominions. This has been variously attributed to the eating of cooked food, soft food, failure to properly clean the teeth, etc. Mouth hygiene has recently enjoyed great popularity, especially in the advertisements for tooth

pastes and tooth brushes. While commendable as a general hygienic measure, mouth hygiene doubtless has little, if anything, to do with the preservation of the teeth. All measures hitherto proposed which stress cleanliness and prompt repair do not get at the root of the evil.

The Development During Very Early Life of a Sound Set of Teeth is the Most Important Factor in Preventive Dentistry

"This is not so much dependent on the softness or hardness of the food, in infancy and very early childhood, as it is on the composition of the diet. If this is not adjusted in an entirely satisfactory manner, the bones and teeth will be poorly developed, and decay of the teeth in early life is then unavoidable.

Teeth and Milk

"Teeth are developed and enameled before they are erupted, and these events take place during the last months before birth and following birth. During infancy the permanent teeth develop just under the milk teeth. The providing of an uninterrupted state of nutrition which is as nearly the optimal as possible at this epoch in the life of the child will serve as the most effective measure in providing in the child a dental equipment which will last well into old age and protect against the danger of invasion by micro-organisms which now so frequently cause serious infections. Although it may sound prophetic at this time, when we have become so thoroughly schooled in referring the health problems of the human race almost exclusively to the field of bacteriology and parasitology, I cannot close this discussion without asserting that there is an even more fundamental, indispensable feature of health promotion than these. The basis for everything that is worth while in life lies in physical vigor, and, as a means of securing for the young, the adult of the future, this priceless treasure, the importance of a properly adjusted dietary can scarcely be overemphasized.

Importance of Milk in the Diet of Western Nations and of Pastoral Peoples

"The third fact which became clear in connection with the examination of the dietary practises of man and animals was that diets which were derived from miscellaneous sources such as cereal grains, legume seeds, tubers, fleshy roots, with or without meats, but supplemented with liberal amounts of milk, sufficed to maintain satisfactory growth and marked vigor.

"The dairy cow is capable of returning at least eighteen per cent. of the energy of the feed she consumes into milk, whereas the beef animal or the sheep return in the form of edible meat but 3.5 per cent. of the energy of the feed which it consumes. Economically, therefore, milk production is the logical business to promote, even from the standpoint of energy values in food, but since the cow utilizes for milk production a very large part of her total nutrients in the form of forage plants, either as pasturage or hay, she appears in a most favorable light as a producer of human food. Forage crops can be produced in much larger quantities on a given acreage than can cereal grains or other seed crops, so that the dairy industry is an economical method of producing human food, as well as an effective means of conserving the fertility of the soil and assuring permanency of yield in agriculture. Any industry which comes into competition with it has economic and nutritional features which condemn it in the eyes of far-seeing people.

Prenatal Life, Infancy and Early Childhood are the Critical Periods

"The greatest good is to come to the next generation, so far as educational effort can accomplish its purpose, through the solicitude of mothers and fathers in so caring for their unborn and born children as to obviate the establishment of those physical defects which not only prevent normal muscular development but which affect the entire outlook upon life. Children who are below the optimum in physical well-being do not radiate happiness, but tend to view the outlook with discontent and to brood over the hardness of life rather than eagerly to seek its opportunities with the expectation of bettering their own condition and that of others. Physical perfection is the greatest assurance that the individual will make an effort, and lack of effort or failure to do one's

best is to the average human being the worst handicap to success.

Malnutrition is Usually the Primary Cause of Physical Inferiority in Childhood

"Malnutrition is not, as many have hitherto believed, ordinarily the secondary result of those physical defects which the clinic seeks to remedy, but it is the primary cause from which these physical defects generally arise. Furthermore, the present widespread view that the most important task in hand is the medical treatment of those children in whom clinically discernible defects exist is a mistaken one. First in importance, both from the standpoint of the physically defective child and of the national welfare, is the establishment of nutritive conditions which are regulated as nearly as possible with the scientific precision necessary to insure optimal well-being. The clinic should occupy second place in the scheme of human betterment.

The First and Most Important Principle is the Extension of the Use of Dairy Products

"Instead of the present consumption of half a pint of milk a day there should be at least a quart per capita. Somewhat more than this would probably be nearer the optimum. This is the feature of the diet of all the pastoral peoples of the past and present which made them superior in physical perfection to all other peoples. The second principle to be kept in mind is that there are dietary properties in the leafy vegetables which are unique among foods of vegetable origin. These have been the 'protective foods' for many of the Asiatic peoples."

All those who have at heart the welfare of the race should read *The Newer Knowledge of Nutrition* (Macmillan), on the use of foods for the preservation of vitality and health, by E. V. McCollum, Ph.D., Sc.D., Professor of Chemical Hygiene in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland, and Nina Simmonds, Sc.D. (Hygiene) Associate in Chemical Hygiene in the School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland.

This new third edition has been entirely rewritten and brought up to date. Since the second edition was published two new vitamins have been discovered. There has also been much new light thrown upon the specific pathological effects of deprivation of individual vitamins. Marked advances have likewise been made in the study of the effects of deficiency of mineral elements on general health.

The relation of the diet to tooth decay, to eye troubles, to instability of the nervous system, osteomalcia, rickets, ovarian function, fertility, longevity, etc., are discussed in the light of all the data of animal experimentation.

New chapters have been added on the relation of the diet to resistance to disease, iodine deficiency and goiter, experimental rickets and calcium assimilation.

I select, with the permission of the authors and publishers, further statements as to milk.

Milk in Relation to Calcium and Phosphorus

"Milk is the most satisfactory single article of food consumed by man. It is not a complete food when taken over a long period as the sole source of nutriment. It is the one food for which there is no effective substitute.

"Milk is a very effective food for supplementing the deficiencies of other substances, such as cereal grains, tubers, and fleshy roots (Lane-Clayton, 1916; McCollum, Simmonds and Parsons, 1921). It is rich in both calcium and phosphorus, and many vegetable foods are relatively poor in these elements. Calcium and phosphorus are prominent constituents of bone. There are but two classes of foods which are rich in calcium, the principal element in lime. These are milk of animals and the leafy vegetables. All other foods fall below the nutritive requirements of man and animals in calcium. The body is very sensitive to deviations from the optimal concentration of calcium in the food. Serious damage results to the bone structures if the diet is not properly constituted.

Milk as a Protective Food

"Milk contains about eighty-seven per cent. of water and thirteen per cent.

of dissolved substances, consisting for the most part of proteins, milk sugar and fats. It is too bulky to be satisfactory as the sole food for the adult. Its value is as a supplement for other foods, correcting their deficiencies. The fact brought out by nutrition investigations is that most animal and vegetable foods are singly or collectively faulty in sufficient degree to interfere with the physical development of the young and to lead to early deterioration of the adult. A most important consideration to be kept in mind is, therefore, the selection of food so as to compensate for the deficiencies of one article by the superabundance of another and thus make a properly balanced dietary. For this purpose milk is the ideal food. Milk and the leafy vegetables are the only foods so constituted as to make good the deficiencies of cereal grains, legume seeds, tubers, roots and muscle meats. For this reason McCollum (1918) proposed that these two classes of foods should be designated 'protective foods,' in order to give them the prominence they deserve.

"Many human infants are born predisposed to rickets because of the faulty diet of the mother. The long period of slow growth in the human infant puts it in jeopardy in a greater degree than is the case with the young of domestic animals, since conditions favorable to rickets can act over a longer time.

Milk for Nursing Mothers

"In a civilized country where food is abundant and people are prosperous, there is a tendency to cater to the sense of taste, and in so doing frequently spoil the diet through an unwise selection of food. In countries where food is scarce and but few articles are available, it tends to be regarded mainly as an agency to relieve suffering through allaying the pangs of hunger. In the latter case the diet is generally faulty because of its simplicity and the absence of an effective supplemental relation among the different articles eaten.

"Physicians and nurses have repeatedly reported to us their observations that many women while nursing infants take diets for days or weeks composed in a great measure of tea and toast, sugar and other articles of food equally unfit for the elaboration of milk. The nursing mother should always take a diet which will insure a satisfactory composition of the milk which she is to secrete. This can best be realized by including in her menus liberal amounts of milk and salads (the protective foods)."

Dr. McCollum writes with the calmness of a scientist, but there is one place in his book where one feels the fire in the heart of the author. That is where he deals with the pregnant and nursing mother. He says:

"The chapter on the pregnant and nursing mother strikes the keynote of this book. It affords proof of the existence of and points the way to a remedy for one of the greatest sources of human inefficiency and suffering. Since it touches the root of the evil effects of one of the most colossal errors of civilization this chapter serves to illustrate most vividly the far-reaching importance of scientific nutrition in preventive medicine. It is only within the last few years that the diet of the human nursing mother in its relation to the quality of her milk has received the attention which it deserves even by investigators. Until the science of nutrition forced upon us the importance of the selection of foods, it was taken for granted that whatever milk was formed by the mammary gland was of good quality. A study of the data makes it apparent how dependent the nursing mother is on the character of her diet as regards the quality of the milk which she will produce. When her diet contains proteins of high biological value, an abundance of the vitamins, inorganic elements in proper amounts and a source of energy in the form of carbohydrates and fats, she produces a milk which will induce optimum gains in the weight of her young. In just so far as her diet falls short in containing these essentials will the quality of her milk be reduced. The nursing mother cannot, except in a very limited degree, put into her milk from her bodily reserves that which she does not receive in her food supply. It is, therefore, of the greatest importance that the pregnant and nursing mother have a highly satisfactory diet in order that there shall be no shortage of the dietary essentials in her milk supply.

Milk and the Children of Japan, China, and the Philippine Islands

"The diet of the Oriental child the first few years after weaning is in certain respects less satisfactory than that of children of the Western Hemisphere. The Chinese, Japanese and Filipinos have not had a supply of milk until recent years, when canned and powdered milks have been introduced.

"Japanese children born in America have had a very different food supply from those in the mother country. Twenty years ago there was a great influx of 'picture brides' into the Pacific Coast states. We have, therefore, a large number of children in this country of Japanese parentage. Both boys and girls are larger at all ages than are Japanese children born and reared in Japan (Kanzaki, 1921). Without doubt it is the superior food which they have received which has made them outgrow their relatives across the ocean. The question has been raised on several occasions when the size of a people has been mentioned in connection with the nature of their food, whether size is not entirely a racial characteristic and inherited, rather than determined by such agencies as nutrition. We have some very good evidence on this point in the histories of our experimental rats which is described in a preceding chapter. When the nutrition of these animals fell just below a certain standard there was no easily observable sign of malnutrition. Their appearance and fertility remained such that they could have been judged by any one to be 'normal,' yet the size diminished from generation to generation. This is not set forth as an example of the inheritance of an acquired character. The inferiority of successive generations may be the result of injury during the nursing period, or due to confining them after weaning to the same inferior diet as that of the parents. The increase in size of Japanese children born in California and fed upon the products of its farms, over that of children of the same ages in Japan, harmonizes with the view.

Lasting Weakness From Defective Food

"Cramer (1922) stated that if children are fed too little of the vitamin-rich foods during infancy there is a lasting weakness which manifests itself if the child is exposed to a strain. He believes that there is a social aspect of the vitamin problem which has not been hitherto recognized, and that this is more important than the actual production of a severe vitamin deficiency. He suggests that the physical make-up of a community is determined largely by the ease and regularity with which an abundant supply of vitamins is secured for the pregnant and nursing mother and the nursing child. Many malnourished children find their way into the school clinics. They are forced to repeat their work in one or more of the grades. They have teeth which are a source of lifelong annoyance.

The Standard of Optimal Well-Being

"We may reasonably set as our standard of optimal well-being in animals, uninterrupted growth to the full adult size, high fertility, low infant mortality, perfection of the bones and teeth, and the ability to resist infections and to reach advanced chronological age before senile characteristics appear. With such standards as a basis of judgment regarding quality of foods, we are justified in the generalization, on the basis of very numerous experimental results from many sources, that, for domestic animals, such as swine or rats, it is not possible to obtain optimal nutrition on any diet the selection of which is restricted to cereal grains, such as wheat, corn, rice, etc.; the legume seeds, such as peas and beans; tubers and roots, such as the potato, sweet potato, radish, turnip, beet and carrot; and muscle meats, such as beef-steak. With any diet restricted to these sources in which highly refined cereal products, sugar, molasses, or other nearly pure carbohydrates find a prominent place, the results to be expected in animal experiments will be less satisfactory than where these manufactured foods are replaced by their equivalent in whole cereals, and other vegetables of the types enumerated.

"Experimental studies on animals have shown that milk and leaves of plants occupy a unique position among our available food-stuffs, in that they are so constituted as to correct, when suitable amounts are included in the

diet, the defects of cereals, tubers, roots, and meats. For this reason it was suggested seven years ago that they be distinguished by the term 'protective foods.'

The Most Satisfactory Type of Diet

"In concluding this chapter it may be well to epitomize the system of living by means of which we and our descendants may recover the physical prestige we are rapidly losing owing to changed conditions, especially with respect to our food habits. The system of diet which can be confidently recommended with assurances that it will go a long way toward improving the physical fitness of the nation is a very simple one, and its daily practise involves no great self-denial. It involves the borrowing of the best elements from those several systems of diet which have been thoroughly tested in human experience and have been found successful.

"The first and most important principle is the extension of the use of dairy products. Instead of the present consumption of half a pint of milk a day there should be about a quart per capita."

II. Health of Children in Great Britain

The facts about milk given herewith explain the state of health of British babies as set forth by Arthur Greenwood in *The Nineteenth Century* for July, 1925. He writes:

"There is, it is clear, a scandalous waste of human life in infancy—a waste which can be largely prevented.

"'It may be safely assumed,' says Sir George Newman, 'that from eighty to ninety per cent. of children are born healthy and with the potentiality of leading normal and healthy lives. Whatever be the facts of parentage, the tendency of nature is to reassert the right of each new generation to the heritage of healthy birth.'

"Sir George Newman, who speaks with unchallengeable authority on this question, has said that 'the young child has to bear a heavy burden of environmental neglect, associated with bad housing, poverty and absence of hygienic supervision. As a result the school medical service is faced with the hard issue that, out of an infant population born healthy, thirty-five to forty per cent. of the children who are admitted to school at five years of age bear with them physical defects which could have been either prevented or cured. This is indeed a bad start on the journey of life.'

"Here we have the indisputable fact that two out of every five boys and girls leaving school to embark on their wage-earning careers suffer from some physical defect or disability, that we know that at least four out of every five children are born healthy. The tragic story works itself out during the years of employment. The total volume of sickness, disease, and disablement in the community has never been measured.

"The annual report of the Chief Medical Officer of the Board of Education for 1922 states that 'Dr. Beddard has attributed ninety per cent. of the cases of rheumatoid arthritis to infection arising from the teeth, and Sir W. Wilcox estimates seventy-two per cent. of fibrositis and arthritis to be due to the same source.'

"The report continues: 'The danger of dental disease begins in childhood and it is admitted that dental sepsis is widespread among school children.' 'The school medical reports from all parts of the country,' we are informed, 'tell the same story—widespread dental decay and consequent ill-health—but, in varying degree, direct and prompt benefit follows inspection and treatment.'

"Or suppose the nation spent a million or two a year in securing skilled attention to the teeth of the child population.

"The truth is that the nation, impoverished by the War and by the consequences of the War, and faced with years of difficulty and struggle, cannot afford the loss of human power and quality to which we submit through the ravages of preventable disease. It is not that we cannot afford to safeguard and promote the health of the people. The simple fact is that we cannot afford the terrible price which a C3 population imposes on itself and on posterity.

"Many children are handicapped by physical defects, abnormality of form

and lowered vitality as the result of failure to secure in infancy a diet adequate to meet their needs. These children represent borderline conditions of malnutrition. It is of great importance to appreciate the fact that there may occur by reason of faulty diet a serious damage to the young without the development of symptoms which definitely mark the sufferer from a deficiency disease. The latter cases are the exception."

The writer of the article in *The Nineteenth Century* does not seem to know that teeth decay begins in the mother's womb, or in babyhood, unless the child gets its ration of milk, and that sound health on the part of children is impossible without sufficient milk.

It is impossible in the brief space at my disposal to deal with the evil effects of sub-nutrition on the intellect and moral character of the child. There is no other tragedy on the planet so terrible as the tragedy of under-nourished children.

A great daughter of England, Evangeline Booth, in dealing with the possibility of the return of the saloon said:

"Let me ask you to step back to the days of the wide-swung doors of the saloon. Let me tear the film from the eyes of men who are blinded by mercenary gains and selfish appetite. Let me point the mothers and fathers of every status of life to the handwriting on the wall of the nation, and bid you read what is written there. Such trembling strokes—such weak, shaky characters—such long spaces between the words; words ill-formed—words ill-spelled—words ill-placed. Such simple little sentences, but vastly comprehensive—such faint impress, but never to be obliterated. Whose are the fingers that have wielded the trembling pen—the thin fingers—the twisted fingers? Whose is the writing? Why it is the handwriting of the children—the handwriting of the children, across the wall of the nation—stretching from sea to sea!

"You can hush to silence all other voices of national and individual complaint; you may make mute every other tongue, even of mothers of destroyed sons and daughters, of wives of profligate husbands; but let the children speak—the little children, the wronged children, the crippled children, the abused children, the blind children, the imbecile children, the nameless children, the starved children, the deserted children, the beaten children, the dead children! Let their weak voices, faint with oppression, cold and hunger, be heard! Let their little faces, pinched by want of gladness, be heeded! Let their challenge, though made by small forms—too mighty for estimate—be reckoned with!

"Let their writing upon the wall of the nation, although by tiny fingers, as stupendous as eternity, be correctly interpreted and read, that the awful robbery of the lawful heritage of their little bodies, minds, and souls may be justly laid at the brazen gate of Alcohol!"

Professor Mendel of Yale University, one of the very highest authorities on nutrition in the world, has stated that:

"Milk remains to-day as the most available source of calcium, an element present to the extent of several pounds in the adult human body. In harmony with what one might thus expect, Professor Sherman's fundamental studies indicate that a deficit in calcium is perhaps the most probable immediate error in the eating habits of the present day. From this standpoint alone the more liberal use of milk in one form or another must make an appeal to those interested in the promotion of national health."

Here are some facts from Scotland which has local option.

Speaking of the results of Local Option in Scotland, Mrs. McKelvey said that, since Kilsyth had ceased to consume alcohol, it consumed three and a half times more milk and was buying more sugar, potatoes, eggs, flour, etc., and was also saving money. Investments in the Kilsyth Co-operative Society had increased fifty per cent. from 1920 to 1923. In two years Kirkintilloch had nearly doubled its War Saving Certificates.

Back in 1914, when the town was swelling the exchequers of the Scots' distillers, infant mortality was 136 per 1,000; in 1923, when the inhabitants were consuming more milk than ever before, it came down to 71 per 1,000.

III. Health of Adults in Great Britain and America

The committee of the Ministry of National Service in Great Britain, covering the examination of 2,425,184 of military age (eighteen to forty-two—1917–18) reports:

"Approximately only one in every three had attained the full normal standard of health and strength and was judged capable of enduring physical exertion suitable to his age.

"The general result may be summarized by saying that medical examinations showed that, of every nine men of military age in Great Britain, on the average three were perfectly fit and healthy; two were upon a definitely infirm plane of health and strength, whether from some disability or failure in development; three were incapable of undergoing more than a very moderate degree of physical exertion and could almost (in view of their age) be described with justice as physical wrecks; and the remaining man as a chronic invalid with a precarious hold upon life."

The Committee then discusses the possible fallacies in the interpretation of such figures and, after allowing for all such possible fallacies, arrives at the following conclusions:

"It seems probable, therefore, that the men examined during the year under review may be regarded in the aggregate as fairly representing the manhood of military age of the country in the early part of the twentieth century from the standpoint of health and physique, and that deductions founded upon the observations made at the medical examinations of these men may legitimately be looked upon as a trustworthy criterion of the national health of this period."

The Nineteenth Century, July, 1920, says:

"Some people have tried to defend our national standard of health by alleging that the doctors were disposed to undue depreciation of the human material before them. As a matter of fact the work was so well done that only 1.4 per cent. of the men examined asked for re-examination, and of this tiny percentage less than half was allowed.

"In the classification made approximately—

"Thirty-six per cent. of the men examined were placed in Grade I., i.e., about 1 in 3.

"Twenty per cent. were placed in Grade II., i.e. about 1 in 5.

"Thirty-one per cent. were placed in Grade III., i.e. about 1 in 3.

"Ten per cent. were placed in Grade IV.

"Putting this in another way—out of every nine men of military age in Great Britain between November, 1917, and November, 1918, three were really fit, two definitely infirm (but capable of improvement), three were incapable of strenuous physical exertion, and the remaining man was 'a chronic invalid with a precarious hold on life.'"

From an article by Fiske, entitled *On Prolonging Human Life*, in *The North American Review*, July, 1920, p. 58:

"Shortly before the war, General Leonard Wood asked me to estimate the probable rejection rate if a draft should be necessary. I answered 'Fifty per cent. if we take ages 18 to 45.' He replied, 'That is conservative, judging from my own observation of recruits examined.' You see, General Wood was not an optimist, but just a military and medical scientist, viewing the matter cold-bloodedly, 'sitting down before fact as a child.' Probably more crimes or at least mistakes have been committed in the name of optimism than in the name of liberty, and we may charge to optimistic amblyopia at least one-fourth of the present world misery, not to speak of war casualties.

"The draft actually revealed about one-third of those examined between the ages 21 and 31 disqualified for active service. The rejection rate rises rapidly with age and at least a 50 per cent rate would have been reached as a total if ages to 45 had been included. There was an excess of 30 per cent in the rate for the entire age group, as against age 21 in our draft, and in Great Britain the rejection rates, according to Major Comrie, were: age 18—23 per cent., age 23—48 per cent., age 41—69 per cent.

"We see this paralleled in the death rate in the population. At age 40 the death rate is about three times what it is at 20."

IV. Alcohol and Longevity

The Medical Research Council has made a careful study of statistics dealing with drink in its relation to longevity. It first takes up the question: Does moderate drinking affect the average duration of life. Herewith are the statements of the Medical Research Council:

"As everybody knows, nearly all insurance companies take special pains to learn the state of health and habits of persons whose proposals are entertained, while there are some which classify separately policy holders who are or are not total abstainers from alcohol. An important example is the United Kingdom Temperance and General Provident Institution.

"Now among males insured by this company (whole-life policies) it was found that 26.4 per cent. fewer deaths occurred among the abstainers than would have taken place had they died at the rate observed in the class of non-abstainers, this great difference does not mean that the non-abstainers were bad livers; as a matter of fact, their mortality was almost the same as experienced by the clients of the twenty-three British Offices whose pooled experience over the years 1863–1893 formed the basis of a widely used table of mortality for insurance purposes (that is, a table showing the chance of a person dying at various ages).

"To use a statistical average which is possibly more vivid than a mere comparison of percentage of deaths, we may take the expectation of life at age thirty, that is, the average number of years lived by persons after the thirtieth birthday. According to the experience of the total abstainers, this is, on the average, a little more than 39 years, while for the non-abstainers it is some three and a half years less; indeed, only one life office, viz., the Clergy Mutual, has recorded an expectation of life superior to that of the Total Abstainers of the United Kingdom Temperance and General Office.

"The observations we have offered and the illustrations quoted indicate the necessity of being cautious in drawing deductions in respect to the relation obtaining between the consumption of alcoholic beverages and longevity. We think, however, that it is legitimate to conclude:—

"(1) That the death-rate is lower and the expectation of life longer in the section of an Insurance Society admitting only total abstainers from alcohol than in the section admitting those who are not abstainers from alcohol.

"(2) That the statistics of mortality are more favorable for abstainers than are the returns for other Societies making no such distinctions, and which issue policies chiefly to persons of a more prosperous social class.

"(3) That the results at present published of Professor Raymond Pearl's field investigations are consistent with those deduced from Life Assurance Statistics.

"(4) That Friendly Society data are concordant with those of the Life Insurance Offices in this respect.

"(5) That the official statistics issued by the Registrar-General indicate an exceptionally heavy mortality among persons occupied in the liquor trade.

"Our duty is merely to assess the value of the evidence dispassionately.

"Since it is admittedly proved that in comparisons extending over many years and embracing different social classes, non-abstainers, including an unknown proportion of excessive drinkers, do not live so long on the average as abstainers, anyone is entitled to conclude that total abstinence is a good practical rule of conduct for those who desire to live more than the average term of years."

"It is certainly proved that total abstainers are longer lived than non-abstainers," said Arthur Hunter, an actuary of the New York Life Insurance Company and chairman of the central bureau of the Medico-Actuarial Mortality Investigation.

Here are Statistics of forty-three American and Canadian Companies reported by the Medico-Actuarial Mortality Committee, 1909-1914:

DEATH RATES OF POLICYHOLDERS IN FORTY-THREE AMERICAN AND CANADIAN LIFE INSURANCE COMPANIES

Normal death rates	100
Drank daily two glasses beer or one glass whisky prior to application for insurance, death-rate	118

Formerly intemperate, reformed without treatment, death-rate	132
Occasional immoderate drinking within five years prior to application for insurance, death-rate	164
Drank daily four to six glasses beer or two glasses whisky prior to application for insurance, death-rate	186

Another way of presenting these facts are found in this table:

The Effect of Alcohol on Longevity

Dr. Oscar H. Rogers, N. Y. Life Insurance Co.

	General Experience	Abstainers	Non-Abstainers
The United Kingdom Temperance and General Provident Institution	100%	84%	112%
The Sceptre Life	100%	77%	116%
The Australian Temperance and General	100%	82%	133%
Scottish Temperance	100%	90%	125%
Security Mutual	100%	71%	105%
Mutual Life	100%	87%	107%
Northwestern Mutual	100%	90%	114%
All combined	100%	86%	114%

The premature death of those who drink bears heavily on the insurance companies and also on the manufacturers of beer and whisky.

This leads *The Brewer's Journal* of England to state mournfully (February 15, 1922):

"Yearly tens of thousands of alcoholic drinkers die. With the rising generation and whether or not they take to alcohol rests the future of the Trade commercially, politically and economically."

V. From the Report of the Medical Research Council; Disorders of the Digestive System in Chronic Alcoholism

"It is well known that a frequent cause of death in the subjects of chronic alcoholism is cirrhosis of the liver with dropsy. An organ is said to undergo cirrhosis when the fibrous connective tissue is increased and there is an associated degeneration of the cells upon which the function of the organ depend.

"Chronic inflammation of the stomach (gastritis) is met with in heavy drinkers, especially in those who indulge in large quantities of spirits. It precedes and is, in a great measure, responsible for, the disease of the liver. The chronic irritation and subsequent inflammation of the mucous lining of the stomach sets up degenerative changes in the cells which secrete the gastric juice and the hydrochloric acid essential for digestion, while the prevention of bacterial fermentation may be completely absent.

"The continuous circulation of these poisons in the liver gives rise to prolonged irritation of the connective tissue supporting the portal vein, its branches and remote ramifications throughout the organ. A chronic inflammation is thus brought about in this tissue, accompanied by a degeneration of the intrinsic cells of the liver, which at first is enlarged. This enlargement in many cases persists until fatal dropsy sets in, or the more complete conversion of the chronic inflammatory tissue into fibrous tissue may eventually cause such a shrinkage of the organ that it becomes much smaller than natural and its surface is so irregular and nodular as to be termed 'hobnailed.'"

The Medical Research Council dealing with the mortality of persons engaged in the liquor trade made this statement:

"According to the published statistics of a large insurance company (the Prudential) the expectation of life of insured persons belonging to the liquor trade is at age thirty as much as fifteen years less than that of the abstainers noticed above, and, indeed, many years short of the average for all males as computed in the Registrar-General's life tables for England and Wales. The data of the Actuarial Society of America also show that persons employed in liquor saloons die at very high rates. It was found that proprietors, managers and superintendents of liquor establishments, who did not attend the bar, experienced a mortality which was 135 per cent. of the standard rate; when they did attend the bar, the percentage rose to 178 per cent., while the death rate from cirrhosis of the liver was sixfold the normal rate."

The Registrar-General's reports in Great Britain constantly allude to the unusual mortality in the liquor trades. Here are some statements made by officials of the British government:

"The Mortality of men who are directly concerned in the Liquor Trade is appalling."

"The Mortality of men who are directly engaged in the supply of spirituous liquors still continues to be enormous."

"That this terrible mortality is attributable to drink might be safely assumed a priori, but the figures render it incontestable."

The results of investigation made by eight American insurance companies justify the British official reports in these words:

"Saloon keepers have a death rate higher than that of underground mine foremen; brewery foremen, maltsters, and the like, have a death rate higher than electric linemen, glass workers, city firemen (laddermen, pipemen, hosemen), metal grinders or hot iron workers, although there is nothing in the brewery or saloon business *per se* that is at all hazardous or unhealthful, aside from the possible temptation to drink and its collateral hazards.

"Among hotel keepers tending bar the death rate from cirrhosis of the liver was six times the normal; from diabetes, three times the normal; from cerebral hemorrhage or apoplexy, nearly twice the normal; from organic diseases of the heart, nearly twice the normal; from pneumonia, nearly twice the normal. For brewery officials insuring under forty-five, the death rate from cancer and other malignant tumors, cerebral hemorrhage and apoplexy, organic diseases of the heart, pneumonia and Bright's disease, among the proprietors, managers and superintendents, is three times the normal. The death rate from suicide is nearly twice the normal."

Proof of the statement that employment in the liquor business is the most dangerous of all occupations is furnished by the following facts cited by the Medical Research Council. In this table the *Standard Population* is the population of males, aged from 25 to 65 years, which in the period 1900 to 1902 furnished 1,000 deaths from all causes.

	1910–1912		
Group	*Alcoholism*	*Alcoholism and Liver Diseases*	*All Causes*
Railway Engine Driver, Guard, Porter, etc...	2	11	586
Coal Miner	3	13	727
Butcher	18	56	885
Dock Laborer..	26	43	1,127
Publican, Innkeeper, etc. ..	50	152	1,265

During the year 1918 the British government reduced the amount of alcoholic drinks. The following table shows a reduction of 58 per cent. of cases of cirrhosis of the liver as between 1914 and 1918:

TOTAL CONSUMPTION OF BEER, SPIRITS, AND WINE IN THE UNITED KINGDOM 1914 AND 1918

	Standard barrels *Beer*	Proof gallons *Spirits*	Gallons *Wine*
1914.....	35,446,000	32,596,000	11,637,000
1918.....	12,471,000	14,681,000	7,613,000

England and Wales	*1914*	*1918*
Convictions for Drunkenness...	183,828	29,075
Deaths from Cirrhosis of the Liver	4,148	1,730
Deaths from Alcoholism.....	676	81
Cases of Attempted Suicide....	2,385	666

VI. Value of Alcohol

Use in Hospitals

The Medical Research Council states:

"It is necessary to discuss whether alcohol has, apart from its food value in the sense already defined, any such specific stimulant action on nutrition. Medical opinion formerly attributed to alcohol an effect of this kind; certain wines and beers especially were credited with specific value in the 'building up of the constitution,' and were widely prescribed in cases of malnutrition, such as that due to tubercular infection. This view is no longer widely held by medical men, but appears still to be current as an article of popular belief. There are probably many who regard abstinence from alcohol as incompatible with the development and preservation of a robust and vigorous bodily habit. Accurate observations lend no support to such a belief.

Alcohol as a Medicine

"Alcohol in its various preparations has always played a part in the treatment of many diseases, and it is only in recent times that its usefulness has been questioned. The use of alcohol in hospitals has been much reduced, without injury to the patients, and in some clinics it has been abandoned altogether.

"In the first place it must be realized that a large part of the reputation

which alcohol has enjoyed as a medicine is attributable to the belief that it stimulates a feeble heart or failing respiration. With medical men, until comparatively recent years, alcohol was the favorite 'respiratory and cardiac stimulant,' and, indeed, practically the only one available. It is still the most popular domestic remedy for the temporary failure of the heart and secondarily of the respiration, which is known as 'fainting.' It is clearly of importance, therefore, to know whether alcohol really possesses the stimulating action on these vital functions with which it has been generally credited.

Conclusions Regarding the Action of Alcohol on Respiration

"For our present purpose it is sufficient to have reached the conclusion that alcohol, in moderate doses, has no effect on the respiration of practical importance, either for its use by normal persons, or for its medicinal use. The only important effect of alcohol on respiration is the paralysis of the respiratory center by large doses, which, as another chapter shows, is the cause of death in poisoning."

The same result was obtained in the United States by the reduction in the consumption of alcohol during war time and by the 18th Amendment passed in 1919, as shown by this table:

DEATHS FROM CIRRHOSIS OF THE LIVER IN THE UNITED STATES PER 100,000 POPULATION

(U. S. Registration Area)

1906–10	1911–15	1916	1917	1918	1919	1920	1921
14.3	13.2	12.3	11.4	9.6	7.9	7.1	7.4

New York City for several years after the passage of the 18th Amendment gave results identical with the experience of England and of the United States. That is, a falling off in the number of deaths from cirrhosis of the liver with the decrease of drinking.

Here are statistics from the Health Department, New York City:

	ANNUAL AVERAGE				
	Alcoholism	Wood alcohol	Alcoholic poisoning	Total all alcoholic mortality recorded	Cirrhosis of liver
1910–18.....	578	4	2	585	820
1920–22.....	163	19	5	181	331
Decrease....	415	15 incr.	8 incr.	404	489
Decrease	59 per cent.				

VII. Alcohol and Physical Activity

The Medical Research Council shows how a pint and a quarter of beer reduces the experienced climber to the level of a beginner. Durig observed the effect of alcohol upon the muscular exercise involved in walking to the top of a hill. The ascent and the route taken and the time of day and other conditions of the ascent were kept as far as practicable the same for a number of successive repetitions, with the exception that on some days 30 cubic centimeters of alcohol in 150 cubic centimeters of water, i.e., as much alcohol as is contained in 2 oz. of whiskey or 1¼ pints of beer, was taken in addition to the daily ration. This dose was taken at breakfast before starting. It was found that although the walker, who was accustomed to moderate use of alcohol, felt in himself no difference between his condition on the alcohol and non-alcohol days, the distance and ascent per minute was on the alcohol days less, 12 to 14 per cent., than that on the non-alcohol days.

In short, alcohol in a dose of 30c.c. tended to undo the effect of previous training. The experience of all men who need to be a hundred per cent. efficient is the same.

A Prize-Fighter's Experience

The following is from a very well-known professional Finnish prize-fighter, Wladyslaw Pztlasinski, who has given an impetus to the sport of fighting in Finland. He relates the following incident in his experience: "One day I was invited by a family to dinner, and contrary to my habit and principles, I took a glass of champagne. When, that evening, I did my stunt at the circus, I was again victorious but with much more difficulty. I perspired much more than usual; I experienced a strange fatigue which ordinarily I did not feel. The following evening I noticed again, in a way not to be mistaken, that this quantity of alcohol, relatively small, taken the evening before, had had an altogether injurious influence upon my endurance."

Walking also requires endurance. This is the testimony of V. J. Kostiainen, who cites different examples, one in our country:

Effect on Hikers

"Some years ago in Switzerland about twenty young athletes organized a hike, the object of which was to climb the mountain of Rigi and return, all on foot, to the city of Lucerne. The competitors came from many countries. Among them were walkers who were total abstainers and some who carried their wine with them. When the summit was reached the wine drinkers were so fatigued that they were not able to return on foot, and had to take the train back to Lucerne. A few moments after their arrival in Lucerne the abstinent hikers came in, all in excellent form, and well able to make the return very rapidly.

"Our guide was a well-known sportsman who before the start 'fortified' himself with alcohol. On arriving at the summit, he was completely finished. He also had to return by train."

Jack Dempsey, the world's heavyweight champion, wrote to Mr. W. D. B. Creagh, of the New South Wales Alliance (who was also a light-weight champion and boxer) as follows: "I am a total abstainer and have always been one."

This was confirmed by Jack Dempsey in an article in the San Francisco *Chronicle,* in which he said, "I never drink. I'm very nervous in training and they are always trying to make me drink ale. I've refused so far and I am going to stick to it."

Experience in Baseball

Ty Cobb: "No man who expects to succeed at the game should ever think of taking strong drink. We are all interested in the question, for if one man lets down his efficiency we all suffer a handicap. It is a rule among baseball players to let drink alone. I don't believe one in fifty baseball players of any clubs of importance in the country attempts to mix drinks with his ball-playing."

The conclusion is that only those who do not need all their physical energy can afford to drink alcohol.

Declaration of French Athletic Associations

The following declaration has been issued by a French athletic association in which about twenty-four other athletic and physical culture organizations are represented by their officials:

"(1) Whereas, thirty years of practical athletic training, national and international tests and competitions in all fields of human physical activities, as boxing, cycling, fighting, jumping, football, swimming, walking, mountain climbing, flying, have furnished proof, a thousand times verified, a thousand times certified by the most illustrious champions, that for athletes alcohol is an enemy to strength, to speed, to endurance and to resistance to fatigue;

"(2) Whereas, this proof furnished by athletes confirms fully the declarations of the entire medical corps;

"(3) Whereas, this incontestable truth evidently remains the same whether in athletic exercise or physical work connected with the different callings;

"(4) Whereas, alcoholism, even if it is decreasing in France, is none the less the gravest danger threatening the French race;

"(5) Whereas, the athletic world, having reached clear convictions on this question, considers it a duty to give the benefit of its knowledge not only to the young comrades received into the athletic societies, but to all young French people that they may be preserved from an indubitable scourge;

"(6) And whereas, from a similar sense of solidarity it deems it also a duty to explain to intellectual or manual workers that in order to succeed in the struggles of life, they must be in possession of all their powers.

"Therefore, the Athletic Federations declare, First, that alcohol is a pernicious beverage which gives a momentary excitation, quickly followed by a depression and a diminution of strength, and

"Second, that the use of alcohol is opposed to all endeavor because it diminishes efficiency, whether in athletic work or in professional work; and all men in athletics and all workers who seek to supplement their strength by alcohol will find only loss and disillusion."

VIII. Alcohol in Relation to Judgment

The Medical Research Council presents the following analysis of the various stages of drunkenness:

Weakening of Self-Control Evident in Every Stage of Drunkenness; Most Prominent Feature of Initial Stage

"Both introspectively and objectively this lack of self-control is clearly discernible in every stage of alcoholic intoxication. It is commonly counteracted in part by the subject, who becomes aware of it, by means of a deliberately increased effort of self-control; but, as the influence of the alcohol increases, this effort ceases to be continuously effective, and the drinker surprizes the observer (whether himself or another) by smiling or laughing aloud at some very small joke, or by remarks or other actions which betray the suspension of his habitual self-control. And the weakening of his critical self-awareness is especially revealed by the fact that such jovial remarks as he now utters seem to him to shine with a luster hardly perceptible to the normal mind; hence the tendency, perhaps the most characteristic and constant feature of the first stage of drunkenness, to flippant whimsical utterances, which, like the rest of the subject's behaviour, betray the blunting of his critical self-consciousness and of his sense of personal responsibility.

Nervous Functions Involved in Second Stage of Drunkenness

"The second stage is that in which the functions of the intermediate level, sense-perception and skilled movement, are invaded and disturbed. At this stage the paralysis of the drinker's higher mental functions reveals itself clearly also in the increasing dependence of all mental and bodily activity upon external stimulation; he lives in and for the present moment only, and, if he is deprived of the stimulus of social intercourse, he quickly lapses into dreamy somnolence or actual sleep.

Third Stage of Drunkenness

"In the third stage, the intellectual processes of judgment and self-criticism and control are virtually suspended; and functions of sense-perception and skilled movement are grossly impaired, and the emotional tendencies themselves are invaded and weakened, so that only strong appeals to them suffice to evoke any response and, in their absence, the drinker sinks inert and nerveless into a heavy sleep, which lasts until the liquor absorbed has all been oxidised.

Risks of Venereal Disease and Accident in Non-Abstainers

"Also we must bear in mind the conclusion of the Royal Commission on Venereal Diseases, that the abuse of alcohol plays an important role in the spread of venereal disease. A single lapse due to the loss of self-control consequent upon convivial excess may lead to infection with disease which shortens life greatly, and such cases would also help to explain the difference between life prospects of abstainers and moderate drinkers. A like remark applies to various forms of violent death, as in street accidents."

The Royal Commission on Venereal Diseases (1916) summed up as follows:

"Abundant evidence was given as to the intimate relation between alcohol and venereal disease. Decrease in the use of alcohol will be an important factor in diminishing the prevalence of venereal disease."

IX. Alcohol in Relation to Mental and Physical Efficiency and Accuracy

The Medical Research Council made a most thorough study of the effects of small quantities of alcohol in relation to the performance of muscular acts and the simpler mental processes. Herewith are some of their findings:

"Complication in arriving at the true effect of alcohol on performance further arises from the fact that while alcohol gives the drinker the impression that he has performed the allotted task with unusual facility and success, impartial and objective examination of the performance shows—almost invariably in cases where the higher faculties are concerned—that both accuracy and regu-

larity have fallen below the normal standard. Self satisfaction has been increased, but neither skill nor power.

Disturbance of Higher Mental Functions in Conditions Falling Short of Drunkenness

"But a point of greater practical importance is that, without signs of intoxication in the full ordinary or in the legal sense of the term, the bearing and individual attitude of mind suffer temporary change as an effect of the drug.

"Accuracy, avoidance of accidents, tactful handling of colleagues and subordinates, observance of discipline, punctuality, reticence in matters of confidence, are all obviously jeopardised; and an additional source of friction is brought to complicate the relations between the employer and the employed.

"Experiments designed for the special purpose of testing the effects of alcohol on the accurate coordination of nervous and muscular activity which is necessary for skilled movements have been carried out by Vernon and by McDougall and Smith. The results showed that more mistakes were invariably made after a sufficient dose of alcohol had been taken. The dose might be as small as 10 c.c. if taken some hours after a meal, though 30 c.c. taken with a meal had only a very slight action. The result of diluting the dose was also to decrease its effect.

The "Eye-Closing Reflex"

"The dose of 30 cubic centimeters of alcohol retarded the reflex speed by 5.9 per cent., taking the average from four of the men; it decreased the eyelid movement's extent by 10.7 per cent., taking the average measure from five of the men.

"Miles found that 40 minutes after a dose of 30 c.c. of alcohol the speed of the movement was decreased by more than 12 per cent. on an average.

Effect of Alcohol on Adjustment of Eye-Movements

"The evidence summarized in the preceding section shows that the execution of skilled movements tends to be impaired by alcohol.

"Guillery remarked that at no stage of the action of any dose of alcohol were the eyeball movements found to be strengthened or rendered quicker.

"Similarly, Dodge and Benedict found that a dose of 45 cubic centimeters of alcohol measurably impaired the speed of starting the movement of turning the eyes toward a fresh object; in short, the speed of directing the gaze.

"A dose of 45 cubic centimeters of alcohol was found, an hour and a half after it had been taken, to increase the delay (average of all six men) by 15 per cent.

"Similar experiments were carried out by Miles, who gave his subject a dose of 30c.c. of alcohol. He found that the speed of the movement was decreased by 13 per cent., 1½ hours after the dose was taken, and remained less than normal for a further 1¾ hours.

"Admiral Lord Jellicoe said: 'As regards straight shooting, it is every one's experience that abstinence is necessary for efficiency. By careful and prolonged tests the shooting efficiency of the men was proved to be thirty per cent. worse after the rum ration than before it.'"

Alcohol and Human Efficiency—Conclusion

The final summary of all the experiments made by Miles of the Carnegie Institution, Washington, D. C., contains these conclusions:

"The whole qualitative picture is one of decreased human efficiency as a quickly-following result from the ingestion of this pharmaco-dynamic substance. . . . There is no longer room for doubt in reference to the toxic action of alcoholic beverages as weak as 2.75 per cent. by weight."

Alcohol and Railroading

There are many occupations where absolute mastery of one's powers is essential to safety.

Warren S. Stone, lately deceased, for many years head of the Brotherhood of Locomotive Engineers, said:

"When you realize that on these fast trains the engineer must recognize and correctly interpret three signals a minute on an average, each of which means the difference between safety and disaster, you can understand why every sense must be alert. We who have spent most of our lives on a locomotive know

the infinitesimal fraction of a second of time that often means safety. Alcohol slows down the brain. Any member of the Brotherhood found guilty of violating the rule which forbids the use of alcoholic liquors either while on duty or while off duty must be expelled, and any lodge of the Brotherhood failing to enforce this law must have its charter suspended by the head of the National Brotherhood. This law is rigidly enforced. The Brotherhood of Locomotive Engineers at its international convention in 1918, with 902 voters present, by unanimous vote of all delegates declared in favor of notional prohibition of the liquor traffic."

For many years the Brotherhood of Locomotive Engineers has had this law upon its books:

"The use of intoxicating liquors, either on or off duty, is prohibited. It shall be the duty of each division or lodge to investigate any violation of this rule and if any member is found guilty he shall be expelled. Any division or lodge failing to enforce this law shall have its charter suspended by the Grand Chief Engineer."

Mr. Stone further said:

"I never expect to be the manager of a railroad, but if I were, the man could not work for me who took a drink of liquor, either on or off duty. I would make no difference between the two, for the man who will drink off duty is not fit to go on duty when the time comes. Liquor has no place in modern railroading."

The practical experiences of a locomotive engineer bears out the conclusions of the work of Miles, Vernon, McDougall, Smith, Dodge and Benedict.

Railroad Conductors

C. S. Whitney, General Secretary and Treasurer of the Order of Railway Conductors of America, wrote, April 1st, 1922: "The officers and members of the Order of Railway Conductors have, ever since the institution of that organization, upheld the principle of Prohibition. Temperance is one of the salient points of our organization, and we believe that the national dry policy has been of great benefit to our members throughout the United States and Canada."

William G. Lee, President of the Brotherhood of Railroad Trainmen, said:

"The viewpoint of our brotherhood needs no strengthening on the prohibition issue. Our organization has always been on record as being emphatically opposed to the sale or handling of intoxicating liquors of any description, and that may be taken as the nearest approach to an expression of mass sentiment on the subject it is possible to get."

The National Safety Council of the United States, including a membership of 1,700 industries and employing over 2,500,000 workers, in 1914 adopted this resolution:

"Whereas, it is recognized that the drinking of alcoholics is productive of a heavy per cent. of the accidents and diseases affecting the safety and efficiency of workingmen,

"Be it resolved, That it is the sense of this organization that it go on record in favor of eliminating the use of intoxicants from the industries of the nation."

Not many years ago it often happened that drunken engineers caused railroad wrecks.

To-day, with 60,000 locomotives operating on 264,000 miles of railroad, carrying each year a thousand million passengers, rarely ever can an accident be ascribed to drunkenness. There are nearly two million men employed by the railroads of the United States. Besides the employees of great manufacturing plants where accuracy of mind and muscle is so important, there are many millions of men and women who drive automobiles. All these people need undiminished all their powers.

X. *The Economic Aspects of Liquor*

It should be stated that the Report of the Medical Research Council is not a prohibition document. Nor does it advocate total abstinence from liquor. The economic aspects of drink are dealt with in the following extract from the report of the Medical Research Council:

"The part played by alcohol in social, industrial and economic life is so considerable that knowledge of its action

on the human body might reasonably have been expected to be full and precise. The total amount of money devoted to the purchase of alcohol by the inhabitants of these islands is nearly fifty per cent. greater than the traffic receipts of the whole railway system, including both goods and passengers; it is more than double the expenditure on bread, and more than equal to the expenditure on meat; before the war it was approximately equal to the total revenue of the State, and was more than eight times the total amount required for interest on the National Debt. Apart from the economic aspect, it is admitted by all parties that the misuse of alcohol exercises a considerable influence on health and longevity, and it is contended by one large section of opinion that it is a main cause of crime and poverty. The ill effect on individual and national efficiency of excessive indulgence in alcohol is not disputed."

Comparison of Expenditures in England

The following table of other national expenditures in Great Britain compared with the drink bill gives a further idea of the magnitude of the drainage on national resources besides the inevitable loss of man-power involved:

Drink Bill 1923.....	£307,500,000
Interest on National Debt.	307,000,000
Gross Annual Value of Lands, Houses and other property under Schedule A	287,000,000
Capital invested on Coal Industry, 1921 (excluding coke ovens and by-product plants)	180,000,000
Rates collected, 1923–4..	162,000,000
Estimated Expenditure on Imperial Defence.....	132,000,000
Education	89,000,000
National Health, and Unemployment Insurance.	79,000,000
War Pensions.....	75,000,000
Relief of Poor.....	48,000,000
Old Age Pensions.....	24,000,000

The Late Lord Leverhulme's Views

More than a year ago Lord Leverhulme, probably the foremost business man of England, after studying the effect of Prohibition in the United States, said that if England would adopt Prohibition it would thereby save enough in five years to pay its indebtedness to the United States.

The Social Aspects of the Alcohol Problem

By Sir Arthur Newsholme, D.C.B., M.D., F.R.C.P.

"The consumption of beer in 1923 in Great Britain was 930 million gallons, as compared with a consumption of 800 millions of gallons of milk, which is equal to about two-fifths of a pint of milk daily for each unit of the population.

"The amount spent on drink in 1923 was equal to the total interest on the National Debt; it was more than the aggregate amount spent on Imperial defence, education, and national health, including unemployment insurance. The amount spent on drink, to take another illustration, would have paid the rental of every house, farm, shop, factory, and estate in Great Britain."

Babson Lays Business Improvement to Prohibition

Roger W. Babson, statistician, recognized authority on business conditions, says:

"The great improvement in business which followed the war was very largely the result of the influence of prohibition and the salvage of our former waste of $2,000,000,000 or more each year due to the liquor traffic. I know of no other way to account for the great impetus in home building, the tremendous numbers of new automobiles purchased, the larger volume of department-store sales, accompanied at the same time by a continued swelling of savings-bank deposits, when the tendency of business as a whole should normally have been downward."

World's Drink Bill Twenty Billions

The world's drink bill to-day approximates twenty billions of dollars annually. Most of that is expended by the people of the very countries of Europe which are now struggling under the burden of national indebtedness.

Liquor cost Great Britain during the past twenty-five years as much as the World War cost her.

XI. Conclusions as to the Use of Alcohol

The Medical Research Council concludes:

"We have now completed our survey of the present state of scientific knowledge regarding alcohol, considered in its several aspects as a food, a drug and a poison. It remains to sum up in this final chapter the main facts which we have ascertained, and to draw from them such inferences as have a practical bearing on the use of alcoholic beverages under the conditions of everyday life.

"The popular belief in the stimulating properties of alcohol, as regards nervous and other functions, seems to be of purely subjective origin and illusory. The apparent stimulation is in the main, if not wholly, an effect of the narcotic influence of the drug, which, as we have seen, dulls the drinker's perception of unpleasant conditions in himself and his surroundings, and may make him feel better, more efficient and stronger than he really is.

"Effects which are apparently of a different character—effects such as the increased loquacity and freer gesticulation produced by alcohol—which are usually interpreted by the drinker, if not by those about him, as evidences of stimulation, are really narcotic effects; they result from the removal of the control exercised by the higher nervous centers, a control which enables the individual to weigh his words and acts, and renders him self-critical and solicitous as to the impression he is making on other people. The removal of his control and the decrease of critical self-consciousness are, in fact, the most constant and characteristic effects of alcohol, whether in the moderate dose which diminishes restraint and imparts courage to the diffident speaker, or in the excessive dose which gives rise to the verbose diffuseness of drunkenness.

"On the other hand, it is certainly true that alcoholic beverages are in no way necessary for healthy life; that they are harmful or dangerous if precautions are not observed; further, that they are definitely injurious for children and for most persons of unstable nervous system, notably for those who have had severe injuries of the head or who have suffered from attacks of mental disorder, or from nervous shock."

Dr. Oscar H. Rogers, Chief Medical Director of the New York Life Insurance Company, after examining the experience of insurance companies in Europe, Australia, and North America, with respect to the effect of drinking upon mortality, said:

"There appears to be no limit within which alcohol may be entirely harmless. It is as if there were a direct relation between the amount of alcohol used and the amount of damage done to the body. The evidence is strong also that the damage done persists a long time after it has been discontinued. Any one who uses alcohol now or has used it in the past is a less desirable risk, all other things being equal, than a total abstainer, and his undesirability is in proportion to the freedom with which he has used the drug."

Dr. Harvey W. Wiley declares:

"I think beer is probably the most dangerous to health of all the pure ordinary alcoholic liquors. I do not know anybody that favors the return of the saloon, and beer without a distributor is a useless commodity, and with a distributor is a dangerous commodity."

The great naturalist, Charles Darwin, wrote:

"Through the long experience of my father and my grandfather, extending over a period of more than one hundred years, I have reached the conviction that no other cause has brought about so much suffering, so much disease and misery, as the use of intoxicating beverages."

From decisions of the Supreme Court of the United States:

"We can not shut out of view the fact, within the knowledge of all, that the public health, the public morals, and the public safety, may be endangered by the general use of intoxicating drinks; nor the fact established by statistics accessible to every one, that the idleness, disorder, pauperism, and crime existing in the country, are, in some degree at least, traceable to this evil."

"By the general concurrence of opinion of every civilized and Christian community, there are few sources of

crime and misery to society equal to the dram shop, where intoxicating liquors, in small quantities, to be drunk at the time, are sold indiscriminately to all parties applying. The statistics of every state show a greater amount of crime and misery attributable to the use of ardent spirits obtained at these retail liquor saloons than to any other source. . . . There is no inherent right in a citizen to sell intoxicating liquors by retail. It is not a privilege of a citizen of the state or of a citizen of the United States."

XII. Does Prohibition Prohibit?

The only convincing facts that I know are those that depend on the laws of nature.

First, the number of victims of cirrhosis of the liver vary directly with the amount of alcohol consumed. In New Jersey the official state records show a decrease in death from cirrhosis of the liver since prohibition of 29.2 per cent. for the three years following prohibition compared with the three years before prohibition. Any doctor would conclude that less liquor was drunk in New Jersey during the three years following prohibition.

In England the manufacture and use of liquor in 1918 was about half what it was in 1914. The number of victims of cirrhosis of the liver decreased fifty-eight per cent.

In New York City the average annual deaths from cirrhosis of the liver for the three years 1920–22 was fifty-nine per cent. of the average of the three years 1910–1918.

The death rate from pneumonia furnishes another test.

In the Journal of the American Medical Association of July 28th, 1922, discussing pneumonia, Dr. Alexander Lambert of New York says:

"There has been a great change in the pneumonia in New York City. When we had all the alcohol that was desired in life, in Bellevue Hospital *one-third* of the forty thousand patients were in the alcoholic wards with or without delirium tremens. That made a strong alcoholic group among pneumonia patients and the death rate was sixty-six per cent. for the alcoholic and twenty-three per cent. for the non-alcoholic group. The type has changed. One does not see the thoroughly poisoned, chronically soaked alcoholic person in the hospital. The change in pneumonia has also been distinct."

Dr. Russell L. Cecil, New York, says:

"The change in the *pneumonia death rate* of which Dr. Lambert spoke is a striking thing. In Bellevue Hospital, the death rate before prohibition was from forty per cent. to fifty-five per cent; but the present rate is only twenty-eight per cent."

Hospital Reports on Pneumonia

At the Cook County Hospital in Chicago, an investigation was recently made of the death rate from pneumonia among abstainers as compared to users of alcohol; 3,422 cases were studied. In the abstainers' group, ages thirty to thirty-nine, the death rate was 18.4 per cent; in the moderate group, 21.1 per cent; in the excessive group, 42.5 per cent.

"We had two wards of fifty patients each; in one group alcohol was given, and the death rate was forty per cent; in the other group alcohol was not given and the death rate was fourteen per cent."

In June, 1916, Dr. H. W. Wiley printed in the *Medical Times* an article on the *Pharmacology of Alcohol*. In this article Dr. Wiley writes:

"There are certain diseases of the liver, such as cirrhosis, in which alcohol is held to be most causative, and its numbing effects on the brain are well authenticated. The fact above noted that the brain and the liver are most tenacious of the alcoholic content gives support to the contention of the special injurious effects of alcohol upon these organs.

"Authors agree generally in the belief that the liver is especially the organ which is most seriously injured by alcoholic intoxication."

Any community where vital statistics are kept can determine in what degree prohibition succeeds or fails by a study of the death from cirrhosis of the liver.

All statistics that I have examined seem to indicate an increase in the use

of liquor after 1922 as compared to the years immediately following Prohibition. There has recently been a discussion as to the amount of drunkenness in the United States, based on a study of the number arrested for this offense.

New York City is probably the wettest spot in the United States. Here are the comparative figures for eleven years and eight months:

ARRAIGNED

Year	*Male*	*Female*	*Total*
1914	14,615	5,160	19,755
1915	14,792	4,795	19,587
1916	13,439	3,639	17,078
1917	11,029	3,153	14,182
1918	5,763	1,521	7,284
1919	4,587	1,070	5,657
1920	5,526	814	6,340
1921	5,900	826	6,726
1922	8,187	1,122	9,309
1923	9,898	1,294	11,192
1924	9,958	1,298	11,256
1925 (1st 8 mos)	5,949	828	6,777

CONVICTED

Year	*Male*	*Female*	*Total*
1914	12,088	4,734	16,462
1915	13,450	4,323	17,773
1916	12,332	3,352	15,684
1917	9,999	2,914	12,913
1918	5,478	1,400	6,878
1919	4,373	999	5,372
1920	5,300	761	6,061
1921	5,710	775	6,485
1922	7,844	1,043	8,887
1923	9,366	1,239	10,605
1924	9,504	1,240	10,744
1925 (1st 8 mos)	5,681	784	6,465

In 1914 there were sixty-eight Neal Institutes for the cure of drunkenness. In 1921 they were all out of commission.

The largest cure in the world for drunkenness was the Keeley Institute in Dwight, Illinois. In 1921 the huge building was leased to the United States. A small brick cottage houses the Keeley Institute in Dwight at this time. There were formerly fifty Keeley Institutes in America. In 1921 there were only twelve and those mostly very small.

The Washingtonian Home in Chicago had 995 patients in 1917. On March 1st, 1920, the Washingtonian Home closed its doors.

Dr. William J. Mayo said in New Orleans, Louisiana, on November 17, 1925:

"There are fewer cases of alcoholism to-day than in pre-prohibition days. Surgical cases coming into our hospitals do not include as many instances of lowered resistance due to alcoholism as in former days."

XIII. Roosevelt and Lincoln

In McCLURE'S MAGAZINE for October, 1895, is an article written by the late President Roosevelt when he was Police Commissioner of the City of New York. He said in part:

"The friends of the saloon-keepers sometimes denounce their opponents for not treating the saloon business like any other. The best answer to this is, that the business is not like other businesses, and that the actions of the saloon-keepers themselves conclusively prove this to be the case. 'Saloon-keeper' is a very elastic term, of course. There are thoroughly honest and reputable men in the business. The same license may be held by two men, one of whom keeps a bar frequented by criminals and the political allies of criminals, while the other has a thoroughly respectable place, where honest Germans take their wives and families, and sit at little tables and drink beer. This last man may be a respectable, law-abiding, and God-fearing citizen, while the first-mentioned is of evil notoriety for his prominence among the dangerous classes.

"But, taken as a whole, the liquor business is certainly not a business which stands well in comparison with other occupations. It tends to produce criminality in the population at large, and law-breaking among the saloon-keepers themselves. In every civilized community saloon-keepers are hampered by more or less rigid restrictions. They do harm enough as it is; but without these restrictions they would do infinitely more. In some localities it is possible not merely to restrict but to stop the traffic altogether. In large cities this is not possible; but it is entirely possible to hedge the trade so as to minimize its attendant evils. When the liquor men are allowed to do as they wish, they are sure to debauch, not only the body social, but the body politic also.

"All of our cities have been shamefully misgoverned in time past, and in New York the misgovernment has been, perhaps, more flagrant than anywhere else. Naturally the saloon-keeper has stood high among the professional politicians, who have been so prominent in New York politics for many decades. More than half of the political leaders of Tammany Hall have at one time or another themselves been in the liquor business. The saloon forms the natural club and meeting-place for the ward leaders and "heelers"—so much that the bar-room politician has become a recognized factor in local political government. The saloon-keepers are always hand-in-glove with the professional politicians, and occupy towards them a position such as is not held by any other class of men. The influence they wield in local politics has always been very great; and until we took office no man ever dared seriously to threaten them for their flagrant violation of the laws. Their power was a terror to all parties.

"But in New York City there has always been a deliberate and systematic evasion and violation of the law. On the one hand, the most powerful and wealthy saloon-keepers have possessed so much influence with the city officials that the police have not dared to interfere with them. On the other hand, the Tammany Hall leaders, and especially the police department, found their profit in permitting the saloons to stay open as a reward for political services, or in return for money paid outright. The politician became continually more corrupt, and the saloon-keeper continually more defiant of law. Thousands of arrests were made every year; but the worst offenders—the big saloon-keepers with a "pull"—were never molested, while the saloon-keeper of small means, who dared to show any independence in political matters, was prosecuted without mercy. The city authorities, notably the police magistrates, the police department, and the district attorney's office, were in league together; and the saloon-keeper alternately profited and suffered by their willingness that he should violate the law. The most powerful saloon-keepers controlled the politicians and the police, while the latter in turn terrorized and blackmailed all the other saloon-keepers."

On Washington's Birthday, 1842, Abraham Lincoln wrote a letter to a youth named George E. Pickett, in which he said:

"I have just told the folks here in Springfield on this 111th anniversary of the birth of him whose name, mightiest in the cause of civil liberty, still mightiest in the cause of moral reformation, we mention in solemn awe, in naked, deathless splendor, that the one victory we can ever call complete will be that one which proclaims that there is not one slave or one drunkard on the face of God's green earth. Recruit for this victory."

This letter and the address Lincoln referred to are to be found in any collected edition of Lincoln's works. I print herewith a part of Lincoln's speech delivered February 22nd, 1842:

"The demon of intemperance ever seems to have delighted in sucking the blood of genius and of generosity. What one of us but can call to mind some relative, more promising in youth than all his fellows, who has fallen a sacrifice to his rapacity? He ever seems to have gone forth like the Egyptian angel of death, commissioned to slay, if not the first, the fairest born of every family. Shall he now be arrested in his desolating career? In that arrest all can give aid that will; and who shall be excused that can and will not? Far around as human breath has ever blown he keeps our fathers, our brothers, our sons, and our friends prostrate in the chains of moral death. To all the living everywhere we cry, 'Come, sound the moral trump, that these may rise and stand up an exceeding great army.' 'Come from the four winds, O breath! and breathe upon these slain that they may live.' If the relative grandeur of revolutions shall be estimated by the great amount of human misery they alleviate, and the small amount they inflict, then indeed will this be the grandest the world shall ever have seen.

"Of our political revolution of '76 we are all justly proud. It has given us a degree of political freedom for exceeding that of any other nation of the earth. In it the world has found a solution of the long-mooted problem as to the capability of man to govern himself. In it was the germ which has vegetated, and still is to grow and ex-

pand into the universal liberty of mankind. But, with all these glorious results, past, present, and to come, it had its evils too. It breathed forth famine, swam in blood, and rode in fire; and long, long after, the orphan's cry and the widow's wail continued to break the sad silence that ensued. These were the price, the inevitable price, paid for the blessings it bought.

"Turn now to the temperance revolution. In it we shall find a stronger bondage broken, a viler slavery manumitted, a greater tyrant deposed; in it, more of want supplied, more disease healed, more sorrow assuaged. By it no orphans starving, no widows weeping. By it none wounded in feeling, none injured in interest; even the dram-maker and dram-seller will have glided into other occupations so gradually as never to have felt the change, and will stand ready to join all others in the universal song of gladness. And what a noble ally this to the cause of political freedom; with such an aid its march cannot fail to be on and on, till every son of earth shall drink in rich fruition the sorrow-quenching draughts of perfect liberty. Happy day when—all appetites controlled, all poisons subdued, all matter subjected—mind, all-conquering mind, shall live and move, the monarch of the world. Glorious consummation! Hail, fall of fury! Reign of reason, all hail!

"And when the victory shall be complete—when there shall be neither a slave nor a drunkard on the earth—how proud the title of that land which may truly claim to be the birthplace and cradle of both those revolutions that shall have ended in that victory. How nobly distinguished that people who shall have planted and nurtured to maturity both the political and moral freedom of their species."

Abraham Lincoln lived to free the slave. "And when the victory shall be complete" a nation will buy milk instead of liquor; then, as John Addington Symonds wrote:

> "These things shall be: a loftier race
> Than e'er the world hath seen shall rise
> With flame of freedom in their souls
> And light of knowledge in their eyes.
> They shall be gentle, brave and strong."

CARCASONNE

I, too, have been to Carcasonne,
Its fifty towers to gaze upon.
I, too, have all the joys to share
Of those who voyage on and dare.
I've seen the battle turrets rise
Like needles, pointing to the skies
And wondered if 'twas all a dream.
Or was it real—what I had seen!
Tiny city, like a toy,
Which for years has given joy—
Inspiration to them all
Who know the history of your wall
Little village in whose street
Men can scarcely pass who meet.
Like a dream that has come true,
Carcasonne, I, too, found you.
Stately city of the Past,
Down the ages you will last—
From your birth one ancient dawn
Till your lovers all are gone.
More—my life is in the sun,
For I've been to Carcasonne!

—*Edith Scott Magna*

THE CHILD: HIS NATURE AND HIS NEEDS

By M. V. O'SHEA

THE most important single factor for the child is the quality of the love of his parents. Parents need to have that rare quality of love which is single-minded in its desire for the welfare of the beloved. If it has a selfish component such as a sense of ownership, or the desire to have the child take up a certain career as a matter of parental pride, or later to make a certain type of match that will further the social ambitions of the parent, then the love has certain qualifying characteristics which may make for an unbalanced type of personality on the part of the child. Without going to further length in the setting forth of principles I will present briefly a few examples of distortions and corrections to give some idea of how personality distortions actually occur. Take, for example, a girl cited by Miss Jessie Taft whose physical ugliness was the basis of a crippling sense of inferiority. The case runs as follows, in her words:

"I have in mind a girl whose physical make-up was fairly adequate but as a very little child she was clumsy, pigeon-toed, and inclined to be afraid to use her body. Her parents laughed at her attempts to walk and run and her frequent falls. This exaggerated her timidity and encouraged her not to try any unusual physical feats. There was no gymnasium work in the schools she attended. She grew very rapidly and at twelve was far too large and heavy for her age. Children called her "Fatty." Her mother said that great big girls should not run about like tomboys, but sit still and be ladylike. Her consciousness of her physical ineptitude increased to a painful extent. She took part in no sports or games that would betray her weakness. She compensated in an over-development of intellectual interests but even here she had not the confidence that her ability warranted. Middle age finds this girl just beginning, through analysis of her own behavior, to get a legitimate self-confidence, intellectually and socially, as well as the free use of her body." Such a case needs little comment. To her natural handicaps the parents added ridicule which prevented her from making those efforts which might have, in part at least, overcome them. The radiation of her lack of confidence in her bodily adjustments to her intellectual sphere is very illuminating as is also the effort at compensating for a physical defect by mental development. The case also shows the characteristic neurotic under-valuation. She really possessed much greater ability than she felt she did.

Another case showing how a sense of inferiority may produce serious symptoms is that of an intelligent boy of thirteen, who, having lost his parents, was living with his sister and her husband. In this home he not only missed the affection of his parents, but he was scolded and punished by his brother-in-law for doing things, or not doing them, quite natural to a boy of his age. By nature he was not aggressive, was easily discouraged and rather shy and reserved.

With this make-up and his particular home situation to deal with, his reactions threatened to become abnormal. He began to steal, for two reasons: in order to obtain money with which to buy candy, etc., and also to cover up a growing feeling of inferiority. He thought it smart to be able to steal. By far the worst effect was on his disposition. He became sullen and insolent, resented any criticism, and cried very easily. Placed in different environment, this boy responded quickly to encouragement and praise, though he was also taught to receive adverse criticism. He lost all his sullenness, became contented, a willing worker, and eager to please. This case shows how an anti-social act like stealing may be resorted to to overcome a sense of inferiority. It also illustrates the possibilities for curative treatment which possibilities are relatively very great in the early years.

How Francis Joseph Made Gold

By Eugene S. Bagger

FRANCIS JOSEPH I, Emperor of Austria, Apostolic King of Hungary, etc., etc., was the hardest-boiled, shrewdest, most prosaic and unimaginative of men, incarnation of the dry-as-dust, heartless, pedantic bureaucrat, with a card index for brain and a filing cabinet by way of soul. Yet the spirit of man is a complex structure, built of paradoxes. Modern psychology goes Talleyrand's oft-quoted saying, that speech was invented to conceal thoughts, one better. It holds that thoughts were invented to conceal the hidden springs of human desire. A man's visible character is as often as not the camouflage of what he really would like to be; and in the very act of seeking escape from himself man only runs true to form. Students of psychology need not be surprized to learn that Francis Joseph spent three years of his life in quest of the alchemists' secret—in trying to manufacture gold.

Of all the revelations made through the opening up to research of the Imperial Secret Archives of Vienna this is the most sensational. Everything else, all the hundreds of state papers and private letters, merely bear out what the world has already known about Francis Joseph; they dress up with numberless details the framework of his character as deduced from his life and his acts. The bundle of documents relating how Francis Joseph cooperated with—or, to put it less politely, how he was bamboozled by—a band of alchemists discloses something new and unexpected. It is a disclosure that runs counter to all preconceived theory. It is as if somebody unearthed papers showing that Queen Victoria was the real author of Darwin's *Origin of Species.*

Yet the facts are there, at once incontrovertible and unbelievable, as facts sometimes have a knack of being. The papers telling Francis Joseph's excursion into the field of gold-making break open the most hidden, most carefully sealed closet of that ruler's soul. The skeleton in that closet was Romance. This most prudent and realistic of men stands herewith revealed as a dupe, a chaser of bubbles, a purchaser of gold bricks.

On September 19th, 1867, three well-recommended gentlemen appeared in audience before the Emperor, then thirty-seven years old. They were the Roman archpriest Roccatani, the Spanish Count Fresno y Landres, ex-colonel in the army of Don Carlos, and a former officer in the army of Maximilian of Mexico, Don Antonio de la Rosa. These three gentlemen submitted a petition offering to reveal a secret process of making gold out of silver. They explained that they approached Francis Joseph as the only mortal worthy of such confidence. Nevertheless they were prepared to have their process tried out by an expert chemist.

It was a fantastic story, but Francis Joseph swallowed it all, hook, line and sinker. The bargain was struck. An appropriation was granted, the experiments were launched and in three months' time there was result. The inventor succeeded in turning silver into gold on a small scale! Francis Joseph already fancied himself the possessor of untold riches, master of a world subjugated by his homemade gold. The next step was to carry out the experiment wholesale—to start on the manufacture of gold in quantities. The expert chemist appointed by the Emperor to investigate the matter himself had been converted from his original scepticism, and was full of hope for ultimate success. But the second experiment was a failure. So was the third. For three years the work was carried on—for three years the inventors sponged on their Imperial patron. But the promised gold persistently refused to be made. At last

The "gold-makers" who sold "the secret of alchemy" to the Emperor of Austria. The adventurers were (left to right) Count Fresno y Landres, Archpriest Roccatani and Don Antonio de la Rosa.

an intelligent official, who had distrusted the alchemists from the outset, called halt to the whole business.

The inventors left Vienna in a hurry and their "secret process" became a unit filed away in the safes of the Imperial Archives. There the affair was disinterred the other day.

This is the gist of a story which once more proves the adage about truth being stranger than fiction. In the episode of Francis Joseph's ad-

venture with the three alchemists life has contrived a novel in the best Balzacian manner.

The plot opens up at Paris, on August 22nd, 1867. The World Exposition is on. The Second Empire, to all appearances still resplendent in its position as the leading power of Europe, is not what it used to be. Its shield has been riddled by the Prussian bullets which at Königgrätz destroyed Austrian supremacy in Germany, by the shots that ended the life of the Mexican Emperor Maximilian, Napoleon III's creature, at Queretaro. But Napoleon III understood better than any monarch that ever lived the fine art of window-dressing. Never did Paris appear more brilliant, more desirable, more full of unlimited possibilities, than in these days of the Indian summer of Bonapartism. It is the Paris of Zola's *Nana*, a Paris of luxury and adventure and exotic perfumes, of a mad rush for gold and love, of fortunes quickly made and quickly lost. The French capital is flooded by romantic and dubious foreigners whirling in the splendor of the Imperial court like moths around an arc-light—but these are prudent moths, moths on the make, as it were. Paris in these days is, more than ever before or after, the Eldorado of soldiers of fortune, of gamblers and plungers of all races and colors and both sexes.

It is at this gigantic rendezvous of exorbitant dreams and tortuous schemes and wild appetites that we first meet our trio of gold-makers. They are the Roman archpriest Romualdo Roccatani; the Spanish grandee, Don José Maroto, Conde de Landres y Fresno; and the former deputy commander of the Mexican gendarmerie under Maximilian, the Neapolitan ex-officer Don Antonio Jimenez de la Rosa.

These names strike the dominant chord of our story. Stevenson or Conrad would have adored them. When three men bearing these long, sonorous, almost improbably musical Latin names, met in the Paris of the late Second Empire, something wild and improbable was bound to happen. What actually did happen, for the time being, was a treaty—a business contract—but a contract that might be sung. The tune would be "Fifteen men on the dead man's chest."

Who are our three adventurers? Roccatani is a priest, of bourgeois origin; the other two are of noble blood, officers and gentlemen. If their names tell their story, so does a photograph, an old faded daguerreotype of the group, rescued from oblivion at the recent plunder of the Secret Archives.

The priest is seated in the center at a table. He is broad, thickly set, prosaic, middle class to the core—looks like one who appreciates a good dinner, but prefers to eat it alone. He has both feet on the earth, but there is something diffident and wistful in his eyes. He looks like a dreamer with a grievance, a misunderstood thinker—withal, a significant face, but not one that instils confidence, let alone affection.

To his right, tall, extremely slender—stays were worn by men in those days—nonchalant, sardonic and arrogant, stands the Conde de Fresno y Landres. He wears his tail coat with it broad lapels open, and has the shoestring tie of a Georgia senator; his long, thin moustaches form a cross with his goatee in the approved Spanish fashion; his narrow dark pig-eyes are shaded by bushy eyebrows. A man of the world, without illusions, without much hope; a high-liver, but a gambler rather than a fighter; a realist clad in the romantic trappings of aristocratic tradition. It is impossible to judge by the portrait whether Father Roccatani believed in the efficacy of his gold-making process; it is almost certain that the Count Fresno did not believe in it, but his disbelief seems to be grounded in dulness rather than penetration.

Roccatani's face expresses will power and stubbornness; that of Count Fresno conceit, disillusionment and disdain; the third member of the syndicate, the ex-Mexican and Neapolitan officer Jimenez de la Rosa, seems of subtler texture than either. His coat is buttoned high, the bow of his cravat is tied with painful exactitude that somehow contrasts with the easy informality of his crossed legs. He looks soft but his softness is not that of a lamb—rather that of a cat. His left

hand is behind his back, and the very nonchalance of his posture suggests that it would be just as well to ascertain what he has in it. It may be only a pair of gloves, but as likely as not it is a dagger.

Perhaps the most interesting fact about this photograph is the relation of the three men to one another—a relation which is mainly negative. The three are grouped around the same table, but they seem to have been brought together, much against their will, by the persuasive powers of the photographer. They are almost demonstrative about having nothing in common; they don't seem to care if the world knows that they hate and despise one another.

On August 22nd, 1867, these three men met in a Paris flat and concluded a treaty of alliance. Henceforth they were bound together for better, for worse, and called each other associates.

"The Reverend Father Roccatani," the document reads, "declares that with the aid of his profound chemical studies and his prolonged experiences he has succeeded in finding a chemical process by means of which it is possible to transform silver into the purest gold. He declares further that he not only lacks the vast sums of money necessary for the exploitation of this process on his own account, but he hasn't got even enough cash to travel around until he finds a prince or a sufficiently wealthy private citizen who would put at his disposal means enabling him to bring forth the advantages inherent in this most interesting discovery. He declares further, that, having lived in retirement, devoting himself entirely to his studies, he lacks connections that might provide him with the credit necessary for obtaining the desired patronage."

Unfortunately, we are told, neither Count de Fresno nor Colonel de la Rosa are in the position to put up the cash necessary for the wholesale production of gold. But they do possess the necessary relations. They pledge to put up traveling expenses and they "offer their connections and their credit to enable Father Roccatani to find the prince or wealthy private citizen" he is looking for. The document proceeds:

"The three undersigned contracting parties therefore have decided to form a company herewith, for the purpose of realizing, with the best possible means, the Rev. Father Roccatani's project and to share the resulting advantages." They contribute to the company's assets as follows: "The Rev. Father Roccatani contributes the secret and his personal collaboration at the execution. The other two gentlemen contribute the sum of fifteen hundred francs which they immediately pay over to the named Father Roccatani, further the necessary cash to finance the search for a prince or wealthy private citizen. They also contribute their credit, their connections and, if necessary, their personal collaboration."

The duration of the contract is determined by the eventual agreement with the sought-for princely patron. If no backer is found, two of the associates may declare the combine dissolved. Within five years, however, none of the associates may withdraw without the consent of the other two.

Decisions have to be made unanimously, as far as possible; by majority vote if necessary. Profits will be divided thus: Father Roccatani receives four-sixths, the others one-sixth each. Should the company disband itself, the Count and the Colonel will have to enable the priest to return to Rome.

These are the main clauses of the Treaty of Paris, concluded on August 22nd, 1867. It was solemnly sworn to and signed by the three associates. The document is written in de la Rosa's hand; it was probably he who drew it up, too. The idea of the undertaking seems to have been his. De la Rosa was the instigator of the whole expedition; it was he who told the others that something ought to be done. Roccatani contributed the secret. But the working capital of the concern, the one thousand five hundred francs—roughly three hundred dollars—was put up by the Count.

The question suggests itself: why did not the three associates go straight to the Tuileries and offer the project to Napoleon III? That they never even considered this step attests to their keen sense of psychology. Napoleon was close at hand; he had imagi-

nation; he was always hard pressed for money, but at the same time had more than enough to finance the gold-making experiment; he was always ready to take a gambling chance. But that was just it. He was much too ready to take a gambling chance; he knew too much about gambling. He was a gambler; he was an adventurer, like the promoters of Father Roccatani's scheme. The Count and de la Rosa felt instinctively that Napoleon III, ex-Carbonaro, ex-soldier of fortune, would read them like an open book. What's the use of trying tricks on a confirmed card sharp?

Then there was Rothschild of Paris. He, too, was near; he, too, had money; he, too, had the spirit of enterprise. But Rothschild did not need the assistance of Italian and Spanish adventurers if he wanted to make gold. He was quite an expert himself in the art of making gold. All he had to do was to send a wire to one or another of his agents at the stock exchange of this or that European capital, and paper, not silver, was being turned into gold. No, Rothschild wasn't a good tip either.

The choice of the three associates fell on the Emperor of Austria.

Who of the three suggested Francis Joseph first? We don't know. He was not obvious. Austria was not exactly the place where one would go with daring schemes. It was an old and tired country. And yet the three associates exhibited the same masterful psychological instinct in their selection as they had done before in their refusal.

Possibly Francis Joseph's name was first proposed by the Chevalier de la Rosa. He was the only one of the three who had any relation, however remote, with the Austrian Court. He had been Deputy Commander of the Mexican Gendarmerie under Maximilian, Francis Joseph's unfortunate brother. There was in Mexico an Austrian legion; de la Rosa must have known a number of Austrian officers; he surely knew the Count Thun, Francis Joseph's Ambassador at Mexico City. The two imperial brothers did not love each other; it was well known that to have been in Mexico wasn't the best introduction in Vienna. After Maximilian was executed Francis Joseph did not like to be reminded of Mexico. In his heart of hearts he knew that he hadn't done all that he might have done in order to save his brother's life. No, Mexico was no "open sesame" to Francis Joseph's heart.

But in his checkered career the Chevalier de la Rosa had seen service under other climes than the Mexican. He had served in the royal Neapolitan army against Piemont and Garibaldi; he had been in the army that defended Gaeta. And the Count Fresno y Landres had been an officer in the army of Don Carlos, legitimate ruler of Spain. The bridge over which the citadel of Francis Joseph's heart was to be stormed was called Legitimism.

In the nineteenth century the Austrian Court was the bulwark of legitimism in Europe, and Francis Joseph regarded himself as the God-appointed champion of the divine right of sovereigns against rebellious subjects. All the petty potentates of Italy and Germany looked to him for comfort and protection. In the Carlist wars which for many years arrayed Spain into two hostile camps Francis Joseph was emphatically on the side of the legitimist pretender Don Carlos. When the Archduke Albrecht told Francis Joseph that the German government (Bismarck, that is to say) recognized the Spanish Republic, the Emperor exclaimed: "Don't talk to me about it, it is an obscenity."

The Count de Fresno y Landres was an ex-Carlist officer. And the Chevalier de la Rosa was an ex-Neapolitan officer. He had been one of the defenders of Gaeta. The defence of Gaeta was one of the few, very few, bright spots of the legitimist record. In 1860 the Sardinian troops, sweeping before them the motley army of the last King of Naples, invested the fortress of Gaeta in which the King and Queen sought refuge with a small but picked force of men. The King was not much better than an idiot; but the Queen was a heroine, Mirabeau's oft-quoted *mot* was applied to her, too: it was said that Queen Marie Sophie was the only man in Naples. She was a Bavarian princess, sister to the Empress Elizabeth and sister-in-

law of Francis Joseph. For three months the besieged, led by the Queen in her picturesque uniform, held out—then starvation forced them into surrender. But the name of Gaeta remained one to conjure with in the conservative circles of the continent. The connections which the Count de Fresno and the Chevalier de la Rosa pledged as their specific contributions to the company's assets were in reality two names: Don Carlos and Gaeta.

It belongs to the ironies of history that the last of the Bourbons had to seek refuge with the successor of those Hapsburg emperors with whom their ancestors had waged secular warfare. In the eighteen-sixties Vienna was the capital of half a dozen deposed Bourbon princes. They held regular court at Frohsdorf, about an hour and a half's ride from the Imperial city. There lived the Countess Molina, widow of the Spanish pretender Don Carlos. There lived also King Henry V of France, known as the Count of Chambord, last of the legitimist pretenders to the French throne. He was a comfortable rotund gentleman who probably preferred the quiet life and culinary pleasures of his Frohsdorf villa to the tempestuous glory of a King of France. No less a personage than the Marshal MacMahon, president of the Third Republic, said of him that he might have become King had he renounced the white banner of the elder Bourbon line and accepted the tricolor flag of the Orleanists.

The Chevalier de la Rosa, defender of the Neapolitan Bourbons, could naturally count on a cordial welcome at Frohsdorf. And a recommendation from Frohsdorf meant a good deal at the Hofburg in those days.

But in approaching Francis Joseph the Bourbon connection meant a good deal more to the three associates than a mere introduction. And it is here that the Chevalier de la Rosa revealed himself as a genius worthy to collaborate with the Reverend Father Roccatani, discoverer of the secret of making gold. After all, the venerable archpriest of Rome merely had an idea—he might easily have starved to death with it. De la Rosa had something better than a mere idea. He had an idea as to how to sell the idea. He hit on a stunt of salesmanship that was nothing short of providential.

Really, it was the simplest thing in the world. They would tell Francis Joseph that they offered to him, and to no one else, the secret of making gold, because that secret belonged by rights to the cause of legitimism.

There is a bait for every kind of fish. Francis Joseph was no easy game for a trio of adventurers. He was shrewd; he was matter-of-fact; he was diffident. But there was one way of dressing the hook that would make him bite with deadly certainty. The Chevalier de la Rosa knew all about it.

Three weeks later the trio arrived in Vienna. Count de Fresno had dug up the expenses—where and how, he did not tell; but he carried a letter of credit for twenty thousand francs. Not much, but enough for a modest start. By putting up this money the Count became automatically the treasurer of the enterprise; but its moving spirit was still the subtle Don Antonio.

They stopped at the Hotel Wandl. Not a place *de luxe* even in those days—but a good bourgeois hostelry, quiet and respectable, situated near the Imperial palace. The distance, indeed, was only four hundred paces. It took a week for the worthy trio to walk that distance.

They had to go a roundabout way. Their first port of call was the Jesuit headquarters. Naturally. In the Vienna of the sixties the Jesuits were powerful, very powerful. If you wanted to do business with the court you had to go to the Jesuits first—otherwise you would be thwarted by a hundred invisible obstacles.

Father Roccatani went to the Jesuits and told about his errands. It was a necessary, an unavoidable step; but it was not without its risks. The Vienna secret police in those days was the best organization of its kind in the world. Is it possible that even the headquarters of the omnipotent Society of Jesus was infested with police spies? It seems probable, for among the documents on which our story is based there is a report to the Chief of Police stating that Father Roccatani had told the Jesuits that he was engaged in "producing a metal more precious than silver."

The Vienna home of the Society of Jesus was half an hour's walk away from the Hotel Wandl. The next station on the way to the Emperor's audience was a ten hours trip by train. It was the residence of the Emperor's mother, the Archduchess Sophie, at Ischl. Sophie was now old and broken—the execution of her son at Queretaro, only a few months earlier, had crushed her spirits; but in the lucid intervals of her melancholia she was still her old self—she was ambition incarnate; and she still wielded tremendous power over her son, the Emperor. The trio waited on her—with what result it is not known, but it seems that the Archduchess, too, put in a word for the three champions of legitimism who had come to make her son richer than Croesus.

The third preliminary visit was to the Emperor's brother, the Archduke Charles Louis, at Artstetten. Here the Jesuit connection was most useful, as the Archduke was entirely under their influence. The assortment of exiled kings at Frohsdorf were honored next. Meanwhile Count Thun, the ex-ambassador to Mexico, got busy in the Imperial Palace. Wires were pulled, hard surfaces belabored, creaky joints oiled. On September 19th, 1867, the three associates landed at last in the anteroom of the Emperor's private cabinet.

Here, however, a hitch occurred. When the three allies appeared at the appointed hour a court official with many courtseys and obeisances and a generous rubbing of hands declared he was most sorry, but the audience had been granted only to two gentlemen, to the Count de Fresno y Landres and the Chevalier de la Rosa. The latter protested vigorously. Impossible! There must be a mistake somewhere. The audience had been expressly requested for three. The secretary was apologetic but firm. There was no mistake. On the contrary, it had been the illustrious Chevalier who had submitted the two names—not three. The illustrious Chevalier tried to drown the secretary's statement in a flood of protestations and deprecations. Father Roccatani's face was getting red with anger. He did not understand all of these rapid exchanges of excited French. But he understood enough—somebody, somehow, did not want him—him, the inventor of the secret of gold making—to appear in the presence of the Emperor. Somebody was double crossing him. Further negotiations—the priest whispers a name into the secretary's ear. Whose name was it? That of the Emperor's mother? Of the Jesuit General? We don't know. Anyway, the secretary smiles sweetly—all right, the reverend father, too, may enter. But the incident is illuminating. Not all is well within the company. The feud between the priest on the one hand and the officers on the other is rife. They conduct private intrigues; they have secrets from each other. It is well for the secretary to make a note of this.

At last—the Emperor himself, tall, slender, smart. Just a few silver threads in his reddish side whiskers. The Chevalier utters a few humble introductory words. Quickly, almost greedily, the Emperor reaches out for the memorandum. Only one more question—to the Chevalier.

"Where did you see service?"

And now—the magic word—the "open sesame" of legitimist hearts:

"At Gaeta, Sire."

"You belonged to the garrison?"

The Emperor's eyes—those famous steel blue eyes—sparkle. Gaeta—no, it wasn't a victory—but it was at least a glorious defeat.

"I did, Sire."

"You were brave—very brave, down there," says the Emperor. A few more questions—about Gaeta—nothing about Mexico—then a word or two to the Count and the priest—the Emperor clicks his heels—the audience is over, the trio is dismissed.

Next day the Emperor studied the petition. Its text follows herewith:

"To His Imperial Majesty the Ruler of Austria,

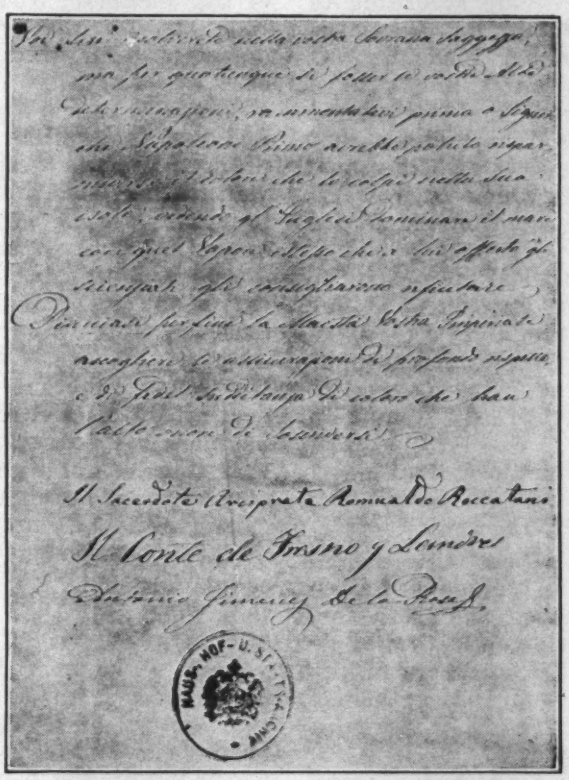
"Sire!

"The profound studies and repeated experiments made by the Archpriest Roccatani have matured in him the conviction that any given quantity of silver may, by being submitted to a certain chemical process, be transformed into pure gold (1000 parts fine).

"This interesting discovery has noth-

ing in common and must not be confused with the utopias of the old alchemists. Its remarkable advantages will surely not escape Your Majesty's profound insight. The three undersigned associates, Archpriest Romualdo Roccatani as inventor, the Count Fresno y Landres and Antonio de la Rosa, take the liberty herewith to place this discovery on the steps of Your Majesty's exalted throne.

"And, as in this decadent century in which we live distrust is natural and suspicion of all kinds justified by sad experience, permit, Sire, the members of this company to introduce themselves severally and to explain why they are submitting their respectful proposal to Your Majesty rather than to any other sovereign.



Photograph of the conclusion of the first memorandum of the alchemists, the "sucker bait" which was addressed to the Emperor. The signatures of the three "con men" are at the bottom.

"Roccatani is a Neapolitan citizen and Roman priest; de Landres an ex-Colonel of the army of Don Carlos, the lawful ruler of Spain; de la Rosa one of the defenders of Gaeta, just returned from Mexico.

"These three individuals, counseled by wisdom not to exploit their secret on their own account nor without the protection of a sovereign, these three individuals who keep aloof from the theory of the political *fait accompli* and who never have bowed their heads before usurpation, know no lawful prince to whom they might advantageously offer their invention, and in all Europe they see nothing but the double-headed eagle which, as guardian of legitimacy, has built its eyrie on the house of Hapsburg. To this center of legitimacy they offer their discovery, without stipulating any condition other than absolute secrecy and a share of the resulting gain.

"The three associates hope that Your Majesty will not find unreasonable the two requests, one of which is simply for a guaranty of their lives and of the dignity of Your Majesty, the other for an appropriate compensation for their efforts and the expenses they have incurred from the start and will continue to incur unto the end.

"The three associates flatter themselves with the hope that the preceding brief statement will suffice to remove any distrust from Your Majesty's Imperial heart, and they believe that they will dispel any suspicion that might arise by declaring to Your Majesty in advance that:

"1. The associates do not ask for a single penny until the operation is completed;

"2. That Your Majesty will not jeopardize any sum even if the hypothesis, rejected, should not fulfil its purpose.

"Sire, if the conditions submitted to Your Majesty do not suffice to instil full confidence in men who flatter themselves with the belief that they do not belong, either by birth, principles, or mode of life, to the lowest layers of society; if it does not suffice as a safeguard against ignominious suspicion to see three men who have left their families, crossed vast distances and as-

sumed tremendous expenses without demanding any reward prior to ultimate success—if all this does not suffice, the associates, though they will not despair, will be at a loss to know what they had better do.

"You, Sire, will decide according to your sovereign wisdom, but whatever your decision may be, remember, O Master, that Napoleon I might have escaped all the grief that tormented him on his island had he realized that the English rule the seas with the same steamship which he, when it was offered to him, had rejected on the advice of scientists.

"May Your Imperial Majesty be pleased to accept the assurances of our profoundest reverence and true devotion with which we have the high honor to sign ourselves,

"the cleric, Archpriest Romualdo Roccatani

"the Count de Fresno y Landres

"Antonio Jimenez de la Rosa.

"Vienna, September 19, 1867."

It was a daring attack, this memorandum drawn up in pompous Italian—like a cavalry charge against a fortress. Did its author, the Chevalier de la Rosa, did the other members of the trio, believe that it would strike home? We don't know. They had taken a long chance. They won.

When the Emperor finished reading the petition he called the State Counsellor Braun and instructed him to summon Professor Schrötter of the Vienna Polytechnic. Schrötter was a famous chemist, inventor of the red phosphorus; he had been the Emperor's teacher in physics and chemistry. He was now commanded to investigate the case of the gold-makers. Francis Joseph decided to go into the matter.

How did this shrewd realist ever allow himself to be hoodwinked by the fantastic project of the three adventurers? To understand this psychological riddle it is necessary to reconstruct Francis Joseph's state of mind in those autumn days of 1867. Briefly: he had just then reached the bottom—he was smitten down by misfortune—and like most men, hoped and prayed for a miracle to save him. The appearance of the gold-makers *was* a miracle. God had heard his prayer—how could he doubt that the portent sent by heaven was genuine?

It was only three months earlier that his brother had died before a Mexican firing party. Maximilian had ever been his rival—in the family, in the favor of the Viennese, who in 1866, when he rode out for the first time after the defeat of Königgrätz, greeted him with cries of "Long live the Emperor Maximilian." Francis Joseph could not but feel that Maximilian would never have plunged into the desperate Mexican adventure had his ambition, his yearning to make himself useful, been granted an outlet in Austria. It was Francis Joseph's inexorable jealousy that had driven the unfortunate younger brother into the clutches of the Aztec avenger Juarez. Francis Joseph knew that he was not innocent in Maximilian's death. Did he feel remorse? If he did, he managed to suppress it; for there was no external sign of grief perceivable in him, no change in the routine of work and of court life.

Nevertheless Maximilian's death could not but aggravate his depression. The year 1867 was one of humiliation, of degradation for Francis Joseph. The year before he suffered the gravest defeat of his life; the Prussian victory at Königgrätz put an end to the six hundred-year-old Hapsburg hegemony in the German Empire. In 1859, at Solferino, Francis Joseph lost his richest province, Lombardy, the revenues of which alone sufficed to support the entire Imperial administration. It was a heavy loss, for with it went Austria's leading position in Italy as well, but it was the loss of something extraneous and inorganic. The loss of Lombardy compared with the loss of supremacy in Germany as the loss of one's wallet compares with the loss of an eye or a limb.

After Königgrätz Francis Joseph's manhood was impregnated with one idea: revenge on the Hohenzollerns. All his actions are grouped round this central purpose. He invites the Saxon Protestant Beust to be his Chancellor—only because Beust was Bismarck's greatest enemy alive. He sought the alliance of France and Italy against Prussia. Finally, he surrendered to the Hungarians whom with the aid of Russia he had defeated in 1849. With

Hungary as a constant danger in the rear, he could not dream of waging another war on Prussia. Hungarians were the best fighters in the Empire; he must have their undivided loyalty.

For the realization of his great plan of revenge on the Hohenzollerns, the appearance of the gold-making trio seemed like the intercession of Providence, like help sent straight from heaven. The finances of the Empire were completely disorganized. Every day Francis Joseph, with Beust and the Archduke Albrecht, talked about "the Day," the day of settling accounts with Prussia. Every one of these conversations ran up against the question as against a rock: where should the money come from? The memorandum of the Chevalier de la Rosa pointed the way out. Money? Why, make gold—make as much gold as you need.

This was the practical side of it. The psychological implications go still deeper. When Francis Joseph ascended the throne at the age of eighteen he was the young hope of Hapsburg, he was to restore the ancient grandeur of the Holy Roman Empire. That was twenty years before. And those twenty years had brought nothing but disappointment. Defeat followed defeat. First Italy was lost; then the leading position in Germany. After 1866, the year of Königgrätz, the ever recurring leitmotif in Francis Joseph's letters is the expression: *meine unglückliche Hand,* "my unlucky hand." He who had fancied himself at the age of eighteen the chosen darling of Fortune had now under the blows of Fate succumbed to the most terrible delusion that can becloud the mind of man: that he was born to fail.

But now all this was to change, literally by the stroke of that oft-invoked magic wand. He was to break out of the prison of his ill luck. The priest Roccatani, the Count de Landres and that excellent defender of Gaeta, de la Rosa, have arrived just in the nick of time. With the aid of their gold manufactured in quantities *ad lib.* he would master the world. And who knows? Perhaps in the deepest recesses of his heart he felt some secret satisfaction for having won another victory over the rival of his childhood, the rival who was the archtype of all his later adversaries, Maximilian, his brother. That fool, Maximilian! He had gone to Mexico in quest of the treasure of the Aztecs—and found death instead. He, Francis Joseph, need not even leave his Imperial palace. The gold of the Aztecs was brought to him on a tray, as it were. After all, he must have been borne under a lucky star.

No, there could be no doubt whatsoever, the arrival of the gold-makers was a good portent.

In Francis Joseph's soul the seed sown by the clever Chevalier de la Rosa fell on fertile ground. Verily that letter was a masterpiece of salesmanship.

Don Antonio did not know it, but he created a *chef-d'oeuvre.* Balzac at his best could not done have better. There was everything in that letter to catch and shackle the Emperor's imagination. Whatever de la Rosa may have been, he was a psychologist. He addressed Francis Joseph as head and foremost champion of legitimism—but what he implied was that Francis Joseph was the successor of Charlemagne, the head of Western Christianity. And, though there was not the remotest allusion to the defeats and disappointments of Francis Joseph's reign, the whole trend of the memorandum, its dominating motif was, *"You can win everything back."*

A German proverb says, "You need bacon to catch mice." De la Rosa used his bacon without stint. It has been said of Francis Joseph that he was impervious to flattery. This is true only in a certain sense. It was impossible to flatter him because he believed honestly and naively that all expressions of homage and admiration were nothing but his birthright; what may have been flattery to other men was to Francis Joseph the unadorned statement of the simplest, most obvious fact.

The real psychological master-stroke of the gold-makers' memorandum was the allusion to Napoleon and Robert Fulton's invention. To remind Francis Joseph, who had missed so many opportunities through hesitancy, through failure to act at the proper moment, of the greatest opportunity missed by Napoleon, was a bravura of intuition worthy of a genius. And to do it in such a way as to arouse the Emperor's distrust of the scientists, the very scientists whose control and supervision the gold-makers had just suggested, was to surpass it.

Did Francis Joseph actually believe it was possible to make gold? Why not? His scientific training was meager, to say the least; it was ended in his eighteenth year. He had no judgment in such matters. But he had a keen sense of dynastic traditions; and gold-making was part of that tradition. The Emperor Rudolf II, patron of Kepler and Tycho de Brahe; the two Ferdinands, strong dark Emperors of the Thirty Years' War; Francis of Lorraine, Maria Theresa's enterprising husband; and Francis Joseph's own beloved grandfather, the Emperor Francis—they all had tried their hand at it. And it was no accident either that the hunt for the philosopher's stone was first followed by Rudolf II in the beginning of the seventeenth century. Under his great-grandfather, Charles V, the House of Hapsburg had the vast treasures of the Eldorado overseas, of the newly discovered American continent, at its disposal. But when, after Charles V's death, the dynasty split into the Spanish and German branches, all the American gold remained under the sway of the former. The alchemistic pursuits of the Hapsburg emperors were a substitute, conscious or unconscious, for the lost gold of the new world.

The finances of the Empire were in a sad mess. Francis Joseph might have gone to the Rothschilds and asked for a loan; but there was just the possibility of a refusal. Was it not better to accept the gold offered by the Catholic legitimists Roccatani, Landres and de la Rosa than to expose one's Imperial self to rebuff on the part of the Jew Rothschild?

There is still another consideration. Lombardy and Venetia, the two Italian provinces lost in 1859 and 1866, respectively, had been the treasure vault of the Empire. Their taxes covered the greatest part of Imperial expenditure. Is it not possible that Francis Joseph regarded the gold brought by Roccatani and his associates as a substitute for the lost Italian taxes? De la Rosa's memorandum even played on this point. Roccatani and the Chevalier were Italian legitimists. They asserted that they had never recognized the theory of political *faits accomplis*, that they refused to bow their heads before usurpation. They bowed their heads before no one except him, the Imperial Champion of Legitimists. Legitimist Italy was offering to its lawful sovereign compensation for that which revolutionary Italy had wrested from him.

After all, was the project of making gold as outlined by de la Rosa's memorandum so fantastic? The associates expressly disclaimed any relations with the old alchemists. Here again they exhibited their uncanny sense of psychology by playing on Francis Joseph's well-known realistic trend of mind, his aversion to anything that smacked of romance. Less subtle swindlers might have blundered into dressing the simple trick in gorgeous trappings. De la Rosa and his friends knew better. They dressed up their fantastic hoax as a simple matter-of-fact business operation.

A week after the first audience, the gold-makers knew that they had won. They were notified by the Imperial Cabinet Bureau that the Emperor had ordered the testing of their project.

And here a new character enters into the play. It is Professor Schrötter of the Vienna Polytechnic. His appearance signifies a crisis for the gold-makers. They must have regarded the scientist as their enemy. Was not science an enemy of the Church, did it not seek to destroy the sway of authority, of tradition and faith? How Father Roccatani must have hated this heavy German professor who had now come to spoil his game!

The fertile brain of de la Rosa met this crisis with another masterpiece; a memorandum in which the trio demands money and guaranties. They propose to the Emperor three alternative schemes. Of the three the second only seems to have been seriously meant; it is sandwiched in between the two others which are included for the sake of bluff. The first idea was to start experimenting at once with silver worth five million florins (over two million dollars) which would in a year transform itself into the purest gold to the value of eighty million florins (thirty-two million dollars). Of this half would belong to the Emperor, the other half to the associates. The trio was well aware that the Emperor would not accept this proposal, which was too sweeping. Francis Joseph did not possess the instincts of a gambler; if he gambled at all he gambled on the instalment plan.

The second proposal was more circumspect. "The inventor will deposit into His Majesty's hands the plan in writing, under the condition that Professor Schrötter, who will conduct the experiment, must not see it." The professor may only supervise the material and the apparatus. When the transformation is complete the Emperor will receive the "product" and the log of the proceedings. Schrötter will tell him whether the product is gold or not. When the authenticity of the invention is thus proved His Majesty will become sole owner of the secret and the associates will obtain their forty million florins. But not in one sum; five millions at once, thirty-five millions divided over ten years. It should be noted that the associates demand the first instalment of their reward *after* the success of the experiment on a small scale, but *before* the process of transformation on a large scale has begun.

This second draft contains another subtle clause; the associates demand that the Emperor personally conduct a second experiment of which Professor Schrötter must know nothing. The associates would furnish all the necessary materials and implements. The experiment is so simple, the memorandum states, that the Emperor will not need any expert assistance.

The third project combines the features of the first and second; experiments on a small scale and process of transformation in wholesale quantities.

All these proposals stipulate absolute secrecy. "The importance of keeping the experiment secret," the associates write, "is easily understood if one considers that publicity would destroy exclusive possession and thereby cause a drop in the value of gold and a rise in the value of silver until both attain the same level. Thereby the discovery would lose all its value."

The memorandum closes by offering "all possible guarantees," though these are not named, but on their part the associates do not expect any other security for the fulfilment of their conditions than the mere word of the Emperor. Finally the associates declare their willingness to accept any change that may be suggested by His Majesty.

Does this last clause mean that the trio give the Emperor a blank check? It does not. It simply means they realize the connection with the Emperor of Austria is more important to them than the fulfilment of any definite condition. At the same time it is a clever appeal to the Emperor's generosity.

The memorandum was shown to Professor Schrötter. This was exactly what the associates wanted to avoid, and, all things considered, Francis Joseph did not act quite fairly in breaking the demanded secrecy. But, as the invention itself was not described in the memorandum, the damage from the associates' point of view was not irreparable. Professor Schrötter told the Emperor that of the three proposals only the second (the experiment on a small scale to precede the wholesale transformation) was acceptable. He formulated his conditions. He himself would ascertain whether the ingredients used were pure, that is to say, whether they did not contain gold in advance; he would provide the vessels, he would weigh the silver to be transformed; he would assay the resulting gold. These conditions are dictated by common sense.

The professor's memorandum winds up: "In the present case diffidence seems imperative for more than one reason, and such diffidence may offend the inventors so much less as it is mutual."

From his first appearance on the scene Schrötter was regarded by the associates as their natural enemy, but they did not want to destroy him. They knew better. They wanted to win him over. For the time being they surrender. The Imperial Cabinet invites them to carry out the first experiment without vouchsafing any definite reward. This was pretty stiff, but the trio were clever enough to "submit unconditionally to the Imperial command." They appeal once more to His Majesty's generosity. This was October 13th, one month after the adventurers arrived in Vienna. The next day Professor Schrötter called on the associates at the Hotel Wandl. He swore a solemn oath that he would keep the secret—that is to say, the secret that experiments were to be conducted at all. The process itself was still unknown to him. Not even the Emperor had been initiated.

The work started on October 17th. The trio had utilized their month well.

There is still one person alive who participated in this experiment. It is the Court Councillor Privoznik, a retired professor of chemistry, in 1867 assistant to Professor Schrötter. He identified to us the room in which the experiments were conducted. It is a room in the ground floor in the Technical University of Vienna, facing the Paniglgasse. This very day hundreds of students pass that room daily. It had a secret entrance which was used both by Schrötter and Roccatani.

"Roccatani," says Professor Privoznik, "could enter Schrötter's room at any time at will, without being observed by anybody." This would indicate that by and by Schrötter's diffidence thawed up. And, indeed, we find the associates referring to him in one of their memoranda as "the prominent and excellent chemist." Did the trio succeed in convincing him? We shall see.

The first period of the experiment stretched from October 17th, 1867, to March 9th of the following year. It seems that the proceedings were started without initiating Schrötter into their exact nature. The first revelation of Roccatani's secret is revealed in a letter addressed to Francis Joseph, dated January 4th, 1868, and entitled "Secret and Procedure."

This document states that in Platino, Columbia, and in Mariposa, California, there exist deposits of white gold, that is to say, gold amalgam, soft grains or needle-shaped crystals, yellowish white in color and of a specific weight of 15.47. Roccatani proposes that this gold amalgam was produced not by a combination of gold and mercury, but from silver which had simply been transformed through the slow action on mercury into gold. "This same process of transformation may be brought about much more quickly by artificial methods, by giving the amalgam the specific weight 15.47. One simply imitates thereby the process of nature. Thereupon the silver amalgam is submitted to a greatly increased temperature. Herewith our secret is revealed and the process is clearly explained."

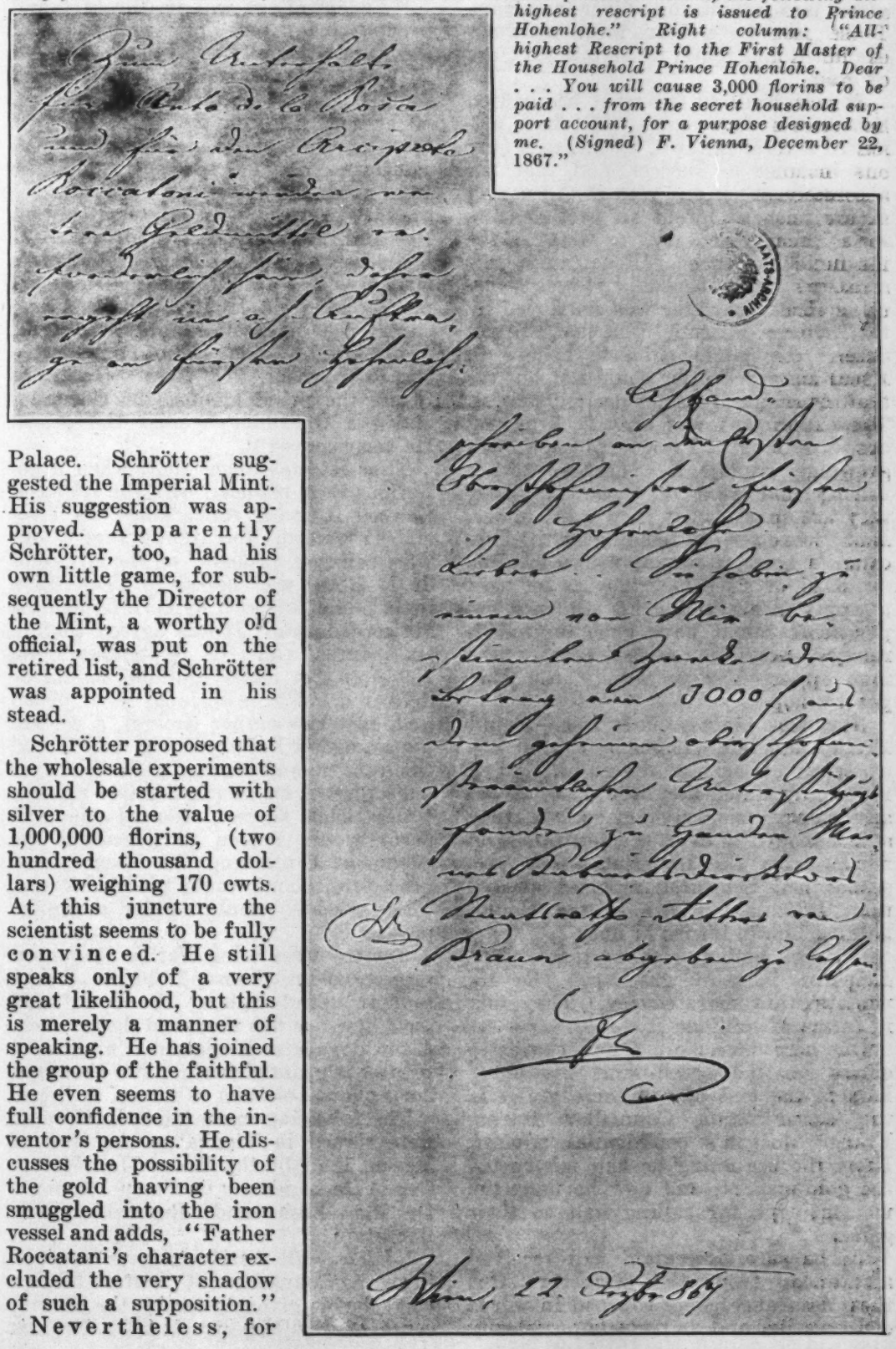
One wonders why Roccatani was so anxious to conceal this procedure from Schrötter. Perhaps he insisted on secrecy because his method was so simple. It is nothing but the old, old procedure of medieval alchemists, only substantially simplified. Roccatani does not seem to give Francis Joseph much credit for scientific knowledge by solemnly entrusting to him this "secret."

To begin with, two glass retorts and an iron vessel were used. In the retorts were 250 grs. of pure silver dissolved in fourteen times as much mercury. The first step was to heat one of the retorts. This was on October 30th. On December 8th there was still no trace of gold visible. On the 20th of March it was found that the retort had a crack. The second retort was exposed to heat continuously from November 10th, 1867, to March 10th, 1868. This, too, cracked. Of gold there was none.

The inventors had better luck with the iron vessel. On October 30th, 1867, they began to heat in it an amalgam consisting of 200 grs. of silver and 2800 grs. of mercury. On the 9th of March, after the amalgam had been continuously heated through fourteen weeks, the contents were examined, and "on this day, to my great astonishment I found that a black powder had separated itself from the amalgam, which, on closer investigation, was found to be *pure gold.* Its quantity was 0.48 per cent. Two other tests from the same vessel yielded exactly the same result."

These words are quoted from a written report of Professor Schrötter, who hurried to his Imperial master as soon as he had found the gold grains, and told him all about the joyous news. This first Schrötter report contains a reservation. He says that the transformation of one element into another, that is to say, of silver into gold, is entirely at variance with the up-to-date experience of chemistry. Further scepticism could be allayed fully only when the remaining quantity of the silver amalgam too had been transformed into gold.

But Francis Joseph did not pay any attention to the qualification. He was convinced; he saw his dream attained. He did not give a rap for the scruples of science; he wanted gold. It was now decided that the wholesale experiments would be undertaken next. The associates proposed for this a desert island or a fortress. Francis Joseph wanted to set up a laboratory in the Imperial



Memorandum in the handwriting of the Emperor. Left column: "Further funds being necessary for the maintenance of Anto. de la Rosa and the Archpriest Roccatani, the following all-highest rescript is issued to Prince Hohenlohe." Right column: "All-highest Rescript to the First Master of the Household Prince Hohenlohe. Dear . . . You will cause 3,000 florins to be paid . . . from the secret household support account, for a purpose designed by me. (Signed) F. Vienna, December 22, 1867."

Palace. Schrötter suggested the Imperial Mint. His suggestion was approved. Apparently Schrötter, too, had his own little game, for subsequently the Director of the Mint, a worthy old official, was put on the retired list, and Schrötter was appointed in his stead.

Schrötter proposed that the wholesale experiments should be started with silver to the value of 1,000,000 florins, (two hundred thousand dollars) weighing 170 cwts. At this juncture the scientist seems to be fully convinced. He still speaks only of a very great likelihood, but this is merely a manner of speaking. He has joined the group of the faithful. He even seems to have full confidence in the inventor's persons. He discusses the possibility of the gold having been smuggled into the iron vessel and adds, "Father Roccatani's character excluded the very shadow of such a supposition."

Nevertheless, for

safety's sake, a check is made with two glass jars containing silver amalgam. These jars have been most carefully examined and found to contain no trace of gold.

It is difficult to say what has caused Schrötter's face-about. He had witnessed several failures, he had seen only one instance of success, and that not absolutely checked. Was it the vanity of the scientist intent on participating in a great discovery, or was it the magnetic influence of Roccatani's personality? Most probably it was something else. Schrötter was convinced by the Emperor himself. Not that Francis Joseph commanded him to believe in Roccatani. Schrötter could not but see that his Imperial master desired success. The experiment was already dragging out too long. Francis Joseph was growing impatient. Emperors are usually told what they want to hear, they are shown what they want to see. Had Schrötter, in dealing with Roccatani's hocus-pocus, applied the same standard of scientific rigor as he used to apply in examining his students, experiments might have gone on indefinitely. Schrötter seized eagerly the first opportunity to satisfy the Emperor's hopes.

Nor were the associates idle. Count Fresno had left Vienna soon after the experiments began. Although they had repeatedly stated they would not accept any money prior to final success, they still managed to extract a few thousand florins from the Imperial purse. No sooner had Schrötter reported success than Roccatani wired to the Count, bidding him to return at once.

Another audience takes place. The Emperor is most gracious. The inventors want more money. They talk in terms of millions.

But here once more a new character enters on the scene—and his entry heralds the end of the comedy. It is the clever State Councillor Braun, Francis Joseph's confidential adviser. From the beginning he had mistrusted the gold-makers; and now he finds the moment ripe for calling halt to their game.

To be sure, Roccatani had received assurances from the Emperor. But these assurances were couched in words conservative and impersonal, typically Francis Josephian. The Emperor said:

"An expedient will be surely found to attain a satisfactory conclusion of the negotiations."

Well, this expedient was never found. Councillor Braun saw to that. He succeeded in convincing the monarch that he did not owe anything to the associates. Braun had seen through the game from the outset. He saw that the associates were not in accord; that Roccatani was anxious to dissolve the Paris contract which he regarded as a leaden weight around his legs; that the priest hated de la Rosa whose subtle superiority he realized and who tried to use him as a tool. Braun's next step was to approach de la Rosa. He meant to use the priest against the Chevalier and the Chevalier against the priest. He was successful.

Thus it came about that, when negotiations were resumed with the Imperial Cabinet Bureau concerning the associates' reward, Roccatani's suggestions were rejected, probably on the advice of de la Rosa, who hoped to clean up a little pile of his own by turning against his confederate. It was agreed that in six months' time, on September 30th, 1868, another expert opinion should be delivered. The associates were promised, in terms rather general, a certain percentage of the profit, but only if and when the manufacture of gold on a large scale proved an unquestionable success. Unless such success resulted the Emperor would return to Roccatani the document containing the "secret and procedure," and would pledge secrecy. The associates would render a similar pledge.

For the time being Father Roccatani receives eight thousand florins (about four thousand dollars) the Count and the Chevalier five thousand florins each. A few days later Roccatani at his special request is granted further two thousand florins to enable him to return to Rome.

The following memoranda in German were signed in Vienna on the 30th of March, 1868, by the Messrs. Jon Maroto Conde De Landres y de Fresno, Antonio De La Rosa and Romualdo Arc. Roccatani:

"I herewith certify to have received through Counsellor of State Hofman 8000 florins given to me by the munificence of His Majesty I. & R. Francis

CASE LIBRARY.

Joseph, Emperor of Austria, that God save and protect.

"Vienna 31st of March, 1868.

"Romualdo Arc. Roccatani."

"The undersigned declare to have received from Counsellor Hofman the sum of ten thousand florins as above said.

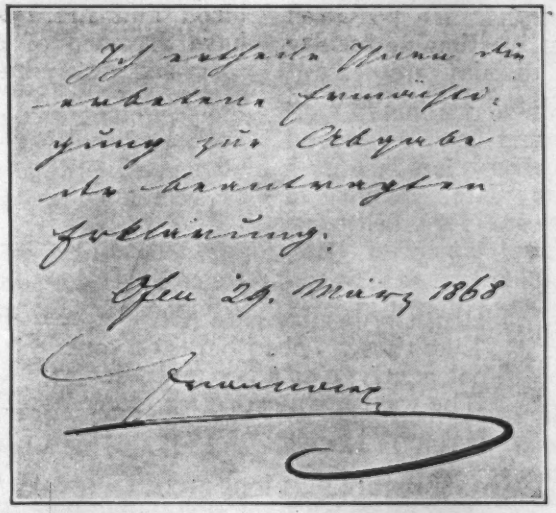
"Vienna 31st of March, 1868.

"Antonio De La Rosa.

"Count of Landres y Fresno."

These sums, amounting in all to less than twenty thousand dollars, represent the whole gain that accrued to the associates from the Vienna expedition. Even as a dupe Francis Joseph managed to preserve his characteristic prudence and economy. Though he did buy the gold brick, he bought it at a reduction—as a bargain.

Meanwhile Schrötter assumed his post as Director of the Mint and continued the experiments, still on a small scale. On August 9th, 1868—six weeks prior to the term of the final verdict—he wrote to Councillor Braun that the vessel in which he, on that memorable ninth of March, had discovered the gold did not, strangely enough, contain gold any more. Schrötter's explanation for this remarkable disappearance is simple: the gold had *retransformed* itself into silver. Schrötter thought the process was reversible. It isn't the making of gold that he is interested in henceforth. He is interested in the scientific bearing of his experiments. He writes that he is faced with the happiest event of his life, with the most important discovery ever made in chemistry.



Last page of a memorandum sent by State Councillor Braun to the Emperor. It proposes the draft of the contract with the alchemists. The portion reproduced is Francis Joseph's final endorsement. It is in the Emperor's own handwriting. "I grant you the requested authorization to issue the proposed declaration. Ofen, 29 March, 1868."

Professor Privoznik, the sole surviving witness of the gold-making adventure, relates that Schrötter began at this juncture to speak of the oneness of all matter. He adhered to the theory of the Frenchman Proust who held that all atoms are condensations of the hydrogen atom—a conception that has found remarkable support in the most recent findings of scientists.

Schrötter's main object was now to gain a more general idea of the subject. He did not care any more for transforming silver into gold alone. He sought for a process by which any metal may be changed into any other and then changed back again.

But his hopes were bound for disappointment. In the spring of 1869 his assistant Privoznik was initiated into the secret and soon afterward was permitted to make the first analyses. They resulted in very small quantities of gold —0.01 and 0.02 per cent. That was nothing. Another ray of hope: the next analysis yielded 0.776 per cent. gold.

But it was soon found that Schrötter had himself by mistake added a small quantity of gold amalgam to the silver. Now at last he is assailed by doubt. Perhaps that initial success, too, was due to a similar oversight.

Roccatani writes sadly from Rome that his bottle contains no gold, and inquires about the success of Schrötter's work. The answer is most discouraging. The Count inquires from the Emperor himself. He is told there is no result yet. De la Rosa scents failure; he proposes all kinds of fantastic schemes. He does not speak any more about making gold. He holds that by his readiness to betray his cronies he has earned

the special gratitude of the House of Hapsburg, and seeks to cash in on it. He asks for the appointment as Austrian Consul at Suez. The Emperor won't hear of it. Then he introduces an Italian Count who wants a Turkish decoration; he asks the Austrian Foreign Office to help. He is politely refused. Finally he offers for sale second-hand Chilean warships—for five million florins, or over $2,000,000. The Austrian Empire isn't interested, and de la Rosa is cheated out of his handsome commission. Well—de la Rosa is a realist. He can't land big game—he will be satisfied with small fry. He accepts a gratuity.

Father Roccatani still has hopes. There is no gold showing yet in the iron vessel. Well, in the absence of gold a plum will do. In the spring of 1870 he applies for the post of chaplain to the Austrain Legation at Rome.

This was the last straw. Instructed by the Councillor Braun, Schrötter wrote the final letter. The gold-making project is abandoned. Roccatani does not get the appointment. Schrötter could not be very happy when he penned this document.

And Francis Joseph? He possessed to a full degree that inestimable faculty—the ability to dismiss unpleasant facts without wincing. He refused to be bothered. Who would dare to remind him of his foolishness? The adventure of gold making was never mentioned again.

When Schrötter wrote that last letter to Roccatani, Francis Joseph was busy on something else. He was looking for an alliance with France and Italy against Prussia. He was still inflamed with the idea of revenge for Königgrätz.

Three months—and there was war between France and Prussia. Francis Joseph, true to Hapsburg tradition, was too late. Before he could make a move France was crushed. At Sedan, where Napoleon III surrendered to the victor, the battle of Francis Joseph's life, too, was lost. No more dreams of revenge on the hated Hohenzollern—a few years more, and the proud successor of Charlemagne was currying the upstart Prussian King's favor.

It was in the year of Sedan that Francis Joseph found out he could not make gold. He was forty years old. The brief holiday spell of romance was over; a bleak work-day was dawning. That bleak work-day was to last forty-six years. Its sun sank into a grave of blood and fire. Francis Joseph may have dreamed of goldmaking in those forty-six years; but there is no record of it.

TO HELEN

Helen, thy beauty is to me
  Like those Nicean barks of yore,
That gently, o'er a perfumed sea,
  The weary, wayworn wanderer bore
  To his own native shore.

On desperate seas long wont to roam,
  Thy hyacinth hair, thy classic face,
Thy Naiad airs have brought me home
  To the glory that was Greece
  And the grandeur that was Rome.

Lo! in yon brilliant window-niche
  How statue-like I see thee stand
  The agate lamp within thy hand,
Ah! Psyche, from the regions which
  Are Holy Land!

Edgar Allen Poe.

THE APOLOGY

By MALCOLM WHEELER-NICHOLSON

TO have the tents of your whole battalion blown down at two o'clock in the blackness of an early Siberian morning isn't what it's cracked up to be. But when your men thus rudely thrust into the driving downpour of hail and rain retaliate by singing "Throw out the lifeline," it takes some of the sting out of it. So Jimmy Sitgreaves thought as he ploshed around in the mud trying to set things to rights and so Colonel Borrows thought sitting in his tent at headquarters. In fact Colonel Borrows gave a lot of credit to Jimmy because his men would sing so lustily under difficulties. Some officers seem to have that faculty, divine spark or whatever it is—an ability to get songs instead of growls out of their men.

But Colonel Borrows had something more on his mind than Jimmy and his battalion at that moment. One of those little yellow telegrams had just come in from headquarters—those confounded little pieces of paper that look so unassuming and raise so much Ned. And this particular little scrap of paper contained enough meat to keep the good Colonel up half the night, alternately swearing and gazing despondently at the fire.

It was not until breakfast time the next morning that one of those swift little rumors, common to soldier camps, coiled and eddied around the tents, leaving in its wake groups of profane and incredulous men. The generally care-free spirits of the 'Steenth Infantry seemed suddenly to be plunged to the lowest depths of Stygian gloom.

"What's on your mind?" asked Jimmy of young Barker, the battalion adjutant, who was striding along, a frown on his face.

"Oh, this man's army makes me sick sometimes, Major," replied the youngster bitterly.

"There never yet was a good soldier who didn't growl," quoth Jimmy sagely. "But what is the especial and particular trouble you are laboring under?"

"You haven't heard the dope yet, Major?" inquired the aggrieved one, surprize in his tone.

Jimmy shook his head, "What dope?" he asked.

"Why, headquarters has policed the Old Man from command of the regiment! We get a new K. O. to-day," announced Barker belligerently. "A bird by the name of Bag; full title, Clarence Ferdinand Beauregarde Bag; specialty, raising hell with every one; previous condition of servitude, a busted Brigadier General, sore at the world." Barker declaimed as though explaining the prize exhibit in the museum.

Jimmy looked dumfounded. He whistled thoughtfully. "Not so good," he announced finally. "Colonel Borrows knows how to handle these Japanese; unless the new Colonel is a bear-cat there'll be hell popping."

And Jimmy strode thoughtfully toward the tent of Colonel Borrows to verify the bad news, for bad news it was to the young Major. Not only was the Colonel a true and tried friend, but he was an ideal regimental commander, a man of few words but with a sparkle of humor and understanding that smoothed over the rough going, made petty bickering laughable, and quietly pulled the regiment into working together joyfully as a unit. And the Japanese situation was disquieting enough in all truth. Not only did the Japanese outnumber the Americans ten to one in far-off Siberia, but it was feared that German success on the Western Front would shake or destroy the Japanese loyalty to the Allies. And those were dark and uncertain days for the Allies, for the German guns were thundering at the gates of Paris.

Colonel Borrows, a fine figure of a man, bronzed with the sun of the Mexican border, the Philippines and Cuba, looked up with a smile of warm friendliness, as the figure of the trim,

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clean-cut young officer appeared at the entrance to his tent.

"Morning, Major," he greeted. "Just in time to go down and meet the new regimental commander with me."

"Then it's true, Colonel?" inquired Jimmy hopelessly.

"Yes. Colonel Bag arrives in about fifteen minutes, to take over the command of the regiment"—and his face was impassive. "It's up to us to do our best for him."

"Well, I wish they'd let us alone," sighed Jimmy wearily, "You've made a splendid outfit out of this mob—seems a damn shame to take it away from you now, especially with these blame Japs pussy-footing around."

"It is a little hard at times, and the Japanese are somewhat of a problem," returned Borrows, his forehead showing a worried frown for a second; "but then, that's what one has to expect in the army and probably things will take a turn for the better." He squared his shoulders as they walked towards the railway station, where all the Cossack old men and women, mangy dogs and wild-haired children of the village gathered each day to see the train come in. The two officers, grave and silent, made their way through the crowds of Russian peasants eternally traveling somewhere with their everlasting bundles of rags, to the edge of the platform where even now the train was pulling into the station.

The one passenger coach came to a stop opposite where they stood. Out of it piled a group of worried-looking American soldiers, laden down with a weird assortment of bags and bundles, looking apprehensively behind them where a shrill voice was raised in vituperation and complaint.

"I told you men to be careful of my lunch basket." Jimmy and the Colonel could hear a high voice raised in petulant irritability. "And now you've forgotten it—I'll have you all tried by court-martial," the voice continued, while the two listeners glanced at each other for an amazed second. Following the voice came its owner, an elderly, short, rather stout officer, red faced and angry-looking.

Stepping forward and bowing courteously, Colonel Borrows introduced himself. "And this is Major Sitgreaves," he continued, "commanding the third battalion. He has——"

"Yes, yes," interrupted the newcomer, testily, "I know all that. I wish you'd see that my baggage is taken to my tent immediately, and that I have a good orderly, *if* there is such a thing in the army, and tell him that I *must* have two soft boiled eggs and toast promptly at noon—not two minutes before noon nor two minutes after, but promptly at noon," the old man repeated solemnly, shaking an admonitory forefinger to impress the gravity of the situation upon his listeners.

"Quite so," responded Borrows stiffening ever so slightly. "We will try to see that you are made comfortable, Colonel." And the three started towards the camp, spread out on the meadows by the side of the Ussuri River, its parallel rows of earth-brown pup tents flanked by the splotches of color from the company flags.

"The regiment has been here for three days, refitting and resting after its hard march from Vladivostock," continued Borrows evenly. "I had issued orders to resume the march in the morning—the men are just getting hardened up and in shape."

"I'll have to countermand those orders immediately," snapped the newcomer. "There's no sense in hurrying. We'll move when we get the railroad to give us a train and not before—no sense in walking when we can ride."

"I'm afraid the regiment will get soft again, Colonel," Borrows objected mildly. "They need to get into physical condition for field service and they need the march discipline badly. They are all practically recruits."

"I'll give them all the discipline they need," retorted the old man unpleasantly, "and I wish you'd make arrangements about the trains at once," he continued.

Arrived in camp the first act of the new commanding officer was to order removed the great silken national and regimental colors from in front of Colonel Borrows' tent to his own quarters. From his impassive exterior no one could read the thoughts of the superseded regimental commander, but it is a hard drop in the army—probably the hardest—from the command of a regiment with its three great battalions

of a thousand men each to the petty odd jobs that fall to the lot of a Lieutenant Colonel without command of any one except the orderly who brings up his horse.

Colonel Bag was christened "Excess Baggage" by some wag down in H Company and the name flew like wildfire among the soldiers. But they carried on without any outward expression of their feelings, except that the life seemed to have gone out of the regiment.

But life certainly was not lacking around the new Colonel's tent. Men were scurrying hither and yon, one with the old man's blankets which he had to warm at a cook fire, another preparing some hot tea, a third in running back and forth from the cook shacks with various dishes. And before half an hour had elapsed four mess sergeants of the company nearest headquarters had been called on the carpet and admonished severely for various failures in the cookery of their evening meal.

"Wonder if he thinks the 'Steenth Infantry is the Waldorf-Astorbilt," grumbled the big mess sergeant of headquarters company. "He gives me a growl, sayin' the meat is too well done. Don't he know these here chow hound soldiers won't eat it no other way? If he don't want his meat cooked I'll cripple the old cow and chase it up to his tent." Whereat, pleased a little with his own wit, the mess sergeant lumbered off to solve some more of the mighty problems which go to make up the daily existence of that harried individual.

At last there came the day when the regiment entrained and to Jimmy was allotted the third train and all the rolling stock and animals of the regiment. In the bustle of breaking camp the new Colonel slipped into the background. Colonel Borrows dryly informed Jimmy that in addition to his other charges the new Colonel would also accompany the third train.

"But what will I do with him, Colonel?" he inquired plaintively.

"I don't know—but I'd suggest that you have a good warm fire built in the officers car, and I don't imagine he'll bother you much." Borrows permitted the flicker of a smile to show for a second.

So Jimmy and his battalion worked in the driving rain and the mud, coaxing refractory and conservative mules into box cars and rolling great escort wagons onto ramps, while Colonel Bag made himself comfortable in the warmth of the officers' car. It was there that Jimmy, his battalion entrained at last, his boots filled with water and his voice gone from shouting commands and directions, found the old man busily engaged in hunting for a missing pat of butter that he had carefully saved against the hardships of the trip. And Jimmy dropped wearily to sleep to the tune of the old fellow's muttered imprecations concerning the butter and the supposed criminals who had privily caused it to be missing.

Arrived at Khabarovsk, that former Russian garrison town, the regiment found itself for the first time under the direct domination of the Japanese army commander. Some sort of a loose agreement between the two governments specified that the Japanese were to assume control of tactical operations. But the Japanese construed this to mean anything and to include everything. Therefore this little muddy Russian town on the Amur was treated to the strange spectacle of white men serving under yellow men—with the yellow men inclined to crack the whip.

The Japanese, a little arrogantly it must be admitted, refused first of all to hold any official communication with the Americans save through the French language. And therefore to Jimmy, who had boned his old Frazer and Squair grammer through many winter evenings, was allotted the duty of being liaison officer.

Colonel Bag, reappearing from obscurity after the regiment was safely in its quarters, established himself in a large office with many clerks and much rattling of typewriters. From here he issued floods of orders to the regiment —orders attempting to regulate every detail of the private, social and official lives of the American personnel. One of the many orders, that requiring all Americans to salute Japanese officers, was honored considerably more in the breach than in the observance by the American personnel aforesaid, especially by Jimmy Sitgreaves, who had had his punctilious salute loftily disregarded by several slant-eyed officers in ill-fitting mustard-colored uniforms.

Pipe in hand, Colonel Borrows drifted into Jimmy's quarters one night and slumped into the hospitable chair by the fire, his brow puckered with worry. Sipping some of Jimmy's best Scotch he gazed abstractedly into the fire.

"Afraid our men are going to get out of hand, Sitgreaves," he announced abruptly, after a silence of some moments.

"How come?" countered Jimmy swiftly, his face anxious.

"Our friends and allies are roughing it up with them—they threw two men from C Company into the Japanese guard-house day before yesterday and failed to report the matter to us until this evening."

"You don't mean it, Colonel!" Jimmy rose excitedly from his chair, anger and amazement struggling on his face.

"Yes." Colonel Borrows puffed evenly on his pipe. "And this afternoon I saw three husky bruisers from C Company throw a whole squad of Japanese infantry off the narrow sidewalk into the mud. You'd better be prepared for squalls to-morrow."

Knocking the ashes out of his pipe, the Colonel rose to depart. Before the door closed upon him he paused a second and then gazing at nothing in particular. "You know, Sitgreaves, it has been my experience in dealing with the hastily civilized, that firmness tempered with courtesy is effective—and the more the firmness the greater the effectiveness." With which cryptic saying he departed, leaving Jimmy to wonder how long before official trouble would start.

He had not long to wait. The very next morning, Staff Captain Yamagato, the little Japanese liaison officer associated with Jimmy, called at the headquarters of the American regiment, nearly bending double with uneasy politeness.

"I am desolated," he averred, in his painfully correct French, "but I am the bearer of a letter from my General." He handed to Jimmy a sheet of heavy rice paper closely typewritten in French.

Taking it, Jimmy glanced hurriedly at the contents —then read more slowly, his face flushing. Motioning Yamagato to a seat, he sat at his desk studying the paper intently, a puzzled frown showing as he read.

Finally he smiled, a tight-lipped, grim sort of smile. "You mean that your people actually wrote this and actually meant it to reach our commanding officer?" he inquired softly.

Waving his hands deprecatingly, his eyes shifty and nervous, Yamagato again replied, "*Je suis desolé, mon commandante, mais*——" And he shrugged his shoulders apologetically.

"Very well," pronounced Jimmy, ominously, and bowed stiffly to the little Japanese who withdrew with many bows and much polite indrawing of breath.

His pudgy figure sprawled over the desk, Colonel Bag fussed importantly with the papers before him, keeping Jimmy standing several moments before he acknowledged the young man's presence with a curt, "Well?"

"A letter from Japanese headquarters, Colonel—rather a surprizing document. Shall I translate it for you?" he inquired evenly.

And Jimmy translated.

His voice restrained and even, he read the first sentence or two, a lurid account of the encounter of the sixteen Japanese soldiers and the three Americans. Then as the letter began to describe the American soldiers as undisciplined barbarians, his voice grated more harshly. His face grew black as he translated further where the Japanese intimated that the "proud young officers and soldiers of His Imperial Majesty's army" were straining at the leash. There followed more threats as to the drastic action to be taken by the Japanese high command, and Jimmy's voice grew ever harsher and harsher and his frown deepened. Finally came the climax, which Jimmy read, his voice almost trembling with anger and his eyes flashing fire, an arrogant and impudent ultimatum couched in the baldest of language, demanding that the American commander make abject apology within twenty-four hours. He concluded the translation and stopped, looking for the first time at Colonel Bag.

A heavy silence descended on the room. Jimmy's face, flushed and angry, underwent a curious change. His mouth open in amazement, he stared

in puzzled bewilderment at the old man.

For Colonel Bag was slumped forward on his desk, his cheeks almost ashen, his face livid with fear. His mouth worked, he swallowed hard, then after several attempts he finally gasped, "But this is terrible, terrible—I will be relieved of command if this is known at our headquarters—I was especially warned against having trouble with the Japanese!" His voice quavered, then flushing red, he banged his puny fist on the desk. "Those blankety blank soldiers—have them thrown in the guard house at once, blankety blank them anyway." He sat huddled at his desk for a moment, a hunted look on his face, while Jimmy gazed at him in shocked and incredulous silence.

"But, Colonel," he ventured, "the Japanese were clearly the aggressors in this thing——"

But the old man was not listening. Sunk in anxious thought, he was mumbling to himself, "Yes, yes, only thing to do, only thing to do," and he reached feverishly for pencil and paper. "I don't think they'll report me if I make a good apology," he quavered half to himself.

Jimmy stiffened as though with an electric shock. "But surely, Colonel, you don't mean to apologize to *them!*" he gasped, incredulous.

His words fell on deaf ears. Old Colonel Bag was looking above and beyond him, his little bloodshot eyes gazing unseeing as with pen in hand he sought for words in which to phrase his letter.

Advancing close to the desk to attract the old man's attention, Jimmy's face grew stern and hard. "Colonel," he spoke sharply, "don't you see that we can't apologize to those people without having them come back again with worse demands? Don't you see that they will try to push us as far as they can—that the only way to break this up is to be firm now? And don't you see the disgrace"—his voice rose—"don't you see the eternal disgrace of an American commander apologizing to any one on earth in the face of such an insult as this?"

The old man looked up, almost frightened at the earnest intentness in Jimmy's face. Then gathering the shreds of his dignity, he drew himself up, his dull eyes smouldering. Clenching his pudgy fist, he shook it at Jimmy. "Young man," he shrilled, "you forget yourself. I don't want to hear any more. I will put you in arrest if you say another word." He glared a second, then subsided puffing, to seize pen and paper, again commencing to write feverishly, his mouth twisting ludicrously with the effort.

The Colonel breathed heavily; the scratch of his pen was the only sound in the room.

Standing as though carved in stone, Jimmy little showed the fire that was raging within him. A tense nervous clenching and unclenching of his hands was the only sign to betray the fierce revolt of his whole nature at the disgaceful thing this puerile old man was about to do.

"My God," he groaned inwardly, "why don't they send us men to command regiments instead of old women in breeches?"

The Colonel suddenly finished, blotted the sheet and handed it to Jimmy, a look of relief on his weak old face.

"That should satisfy them," he quavered. "The War Department cannot hold *me* responsible if I make immediate apology." Again the look of fear came into his dull eyes. "Translate this into French immediately," he ordered. "The quicker we get it to them the better."

Nodding stiffly, Jimmy took the proffered paper and walked into his own office, his heart heavy within him. Some wild idea of handing in his resignation immediately occurred to him. Throwing himself dispiritedly into his chair, he glanced at the paper.

The opening sentence fairly leapt at him. "The commanding officer of the American troops hereby expresses his heartfelt regret to the Japanese high command for the unfortunate actions of his soldiers." With that as the motif the letter went on, a crawling abasement, a fawning apology conceived by fear; a harmful thing to send under any condition, an especially harmful thing to send to the Japanese, seeking as they were for the weak points in the white man's armor.

Sitting dull-eyed and apathetic, Jimmy stared into space for several moments. Then shaking his head wear-

ily, he started to translate the letter into French.

Half an hour later, looking grave and pale, he silently laid a typewritten document on the colonel's desk. The old man, with fussy self importance, held the letter for a sufficient length of time to create the impression that he had read and understood every word, then signed it with a flourish.

"Not so bad," he grunted, with a condescending nod. "See that it is delivered immediately."

That night Jimmy paced the floor, his pipe and book neglected, paced back and forth while the crackling wood fire in his grate sank unnoticed to a heap of white ashes, paced back and forth until the cold gray dawn paled the lights in the room and his servant brought in his breakfast.

Nine o'clock found him seated at his desk in his office, dark circles under his eyes, his face drawn. Murphy, the invaluable, knocked and entered softly with his saber and belt.

"There's a whole raft o' them Japs comin' up the hill, Major. Guess you'll need your side arms." Jimmy silently buckled on the belt and saber, that invarible concomitant to all official calls.

Entering the Colonel's office, he notified the old man of the approach of several Japanese staff cars. Colonel Bag rose, trembling and wildeyed. "You're sure they received our apology all right?" he quavered nervously.

Nodding shortly, Jimmy went forth to greet the visitors, leaving the old Colonel to stand in the middle of the floor peering after him, a picture of worry and fear.

His heart pounding in his ears, his hands cold and his breath coming irregularly, Jimmy nevertheless stood, outwardly composed, while the great yellow cars rolled up and came to a majestic stop in front of the building. Out of the first car, a superbly appointed limousine, stepped no less a personage than the Japanese Chief of Staff himself, a Major General, his breast covered with decorations, his sword, a beautiful Samurai blade, held in his hand.

Some section of Jimmy's brain registered the fact that this man was bulkier than the average Japanese and that his great round face, with its cold, unchanging eyes reminded one of a cat.

Greeting the Japanese chief stiffly, Jimmy waited, his face cold and impassive, while the remaining officers swarmed out of their cars and gathered behind their senior. Then the whole group advanced slowly and gravely into Colonel Bag's office, Jimmy leading the way.

Something like a spasm of disgust passed over his face as his eye fell on the old Colonel. Standing by his desk, a pitiful picture of nervousness and uncertainty, the old man was nothing to bring any joy to the eyes of a military man. His inadequate looking legs, painfully knock-kneed, supported a figure far from soldierly, with its round paunch, its narrow, sunken shoulders and flat chest. His uniform hung on him loosely, his saber dangled behind him in a dispirited fashion, one spur was on upside down, and his collar sagged open. Looking like a caricature of an officer, like a travesty on the profession of arms, he stood there, his hands nervously clasping and unclasping, upon his face a sickly propitiating smirk.

The inscrutable faces of the Japanese betrayed nothing of their feelings at this view of the American commander. The big Chief of Staff waited in silence until his officers grouped themselves behind him.

Colonel Bag cleared his throat nervously. "General, I—I—" he commenced, his voice an uncertain falsetto.

Turning swiftly Jimmy shot at him such a glare of warning that the old man's eyes opened in bewilderment—but he kept silent.

The big Japanese officer suddenly started to speak. Jimmy noted unconsciously that his English had all the flawless perfection of an Oxford don's. The other Japanese officers listened almost reverently as their leader spoke. Jimmy stood like a statue carved in stone, a certain pallor and the grim tightening of his jaw the only signs of the terrific strain he was under. The old Colonel shifted his weight uncertainly from foot to foot, his bleary eyes, bewildered and apprehensive, peering in turn at each one present.

The Japanese officer's words were flowing smoothly and resonantly. "The Commanding General of His Imperial

Majesty's forces in Siberia has directed me to call in person on the American commander at Khabarovsk and to express his apologies for the unfortunate tone and wording of the communication sent to the American commander yesterday."

He continued, his words flowing easily and gracefully, as he went on to describe the deep regret of the Japanese commander and to express his hopes that this minor incident would not disturb the traditional friendship of the two governments.

At his opening words Jimmy heaved an inaudible sigh, the rigid tension at which he had been holding himself seemed to relax, and he leaned back heavily against the desk behind him.

"And," continued the big Japanese officer, "my commander wishes it fully understood that the unfortunately worded letter purporting to come from him was written without his authority and knowledge and was the work of some unauthorized subordinate who will be suitably punished." And the Japanese Chief of Staff came to an end and waited, gazing inquiringly at the American commander.

The room was as silent as a tomb. The old Colonel gazed in helpless bewilderment at the Japanese. His mouth worked but no words came. He was so palpably floundering in a sea of doubt that the silence grew almost embarrassing when finally Jimmy stepped into the breach.

Gravely and quietly, one hand resting easily on the hilt of his saber, he courteously acknowledged the apology and accepted it on behalf of the American commander. "And," he continued, "the American commander wishes me to state that he echoes the hope that the harmonious relations between the two armies will remain undisturbed, and that he does not consider this unfortunate incident, *by itself,*" and Jimmy stressed these two words ever so slightly, "of sufficient importance to report to his government."

Jimmy did not fail to see the lightning swift glance flashed at him by the Japanese officer when he stressed the two words, nor did he fail to sense the air of relief with which the Japanese received the final words.

With much bowing from the waist and much ceremonious hissing of indrawn breath, the group of Japanese withdrew. Jimmy half stumbled into his own office, leaving the old Colonel standing in the middle of the floor, his mouth still agape.

Opening the drawer of his desk, Jimmy drew forth the "apology" he had translated and sent to the Japanese commander. The opening sentence fairly trumpeted its rolling phrases at him.

"A letter purporting to be from the Japanese Commander is herewith returned. Explanation or apology for this uncalled-for insult to the military forces of a great and powerful ally must be made within twenty-four hours or it will become the painful duty of the American commander to report the whole matter to higher authority, advising that relations with the Japanese Government be severed immediately. From the unfortunate and insolent wording of the communication in question it has the air of being the work of some subordinate ignorant of the courtesies required between nations—"

For the first time in twenty-four hours a slow grin came over Jimmy's face. "I won that pot with nothing but a deuce in the hole," he reflected happily, "but, good Lord, wouldn't I have been hanged, drawn and quartered if they hadn't apologized! I *thought* they'd slide out on that 'unauthorized subordinate' stuff," he chuckled.

The door from the Colonel's office opened. Out came the old man, his uncertain air vanished.

"I guess you'll sing a different tune now, young fellow," he cackled unpleasantly. "I settled that business pretty well, eh? It's about time you learned from an older man that most trouble can be avoided by an apology."

As the door closed on Colonel Bag, Jimmy, his jaw tightening in a grim smile, slowly tore up the paper on his desk. "Apology?" he grunted. "Apology be damned!"

MAN'S TRIPLE LIFE

Prenatal, Earthly, Spiritual

By W. W. KEEN M. D., L. L. D.

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IT is just as natural to die as to be born. I sketch the plan of man's Triple Life[1] thus:

The Prenatal Life	BIRTH	The Earthly Life	DEATH	The Spiritual or Disembodied Life

Each step is a step upward and forward—a glorious, progressive evolution.

In our Prenatal Life, as I have shown in my paper on *A World of Billions,*[2] our bodies always begin in one fertilized cell. This quickly divides into two cells, then four, eight, sixteen, etc., so that, in a short time, there are millions of cells.

Very early they begin to differentiate by reason of some, to us, entirely unknown cause—but always in the same way in the millions of babies born every year. How wonderful is this power of differentiation! It was implanted in these rapidly growing and changing cells by the Creator—God. No other possible source exists. It exists alike in plant, in animal and in man. It is especially marked in the latter two. It can only be arrested by killing the mysterious, new, developing organism!

Certain cells, always in exactly the right places, become cartilage, which, by deposit of lime and other chemicals, selected by these cells themselves from the rich circulating blood (again how wonderful!) form at last what is to become the whole skeleton in our earthly phase of life. This skeleton always comprises, for example, on each side, one collar bone, one shoulder blade, one arm bone, two bones in the forearm, the multiple bones of the wrist, the five of the hand, two finger bones for the thumb, and three each for the other fingers. A similar development is true for the legs, head and body. Moreover, the arm always grows at just the *right spot*—not from the front or back of the chest. And all these bones stop growing at about the same age. Why? By reason of the same inherent, mysterious force implanted in them by the Creator—God. Chance could never develop in such an orderly manner in every human and animal embryo, and even in every plant embryo—the seed.

Is it not a marvel that these bones should always be formed exactly alike, with the same peculiar joints, from the free swing of the arm at the shoulder to the restricted movements of the leg (for greater stability) at the hip joint; always with provision for a rotating forearm, yet prohibiting rotation from the knee to the ankle—and in all babies just alike? Exactly the same methodical development is true of animals and of plants.

Other groups of cells form the muscles, which are always attached at their two ends at the same places on the same bones, so that surgically we always know where to find them. Arteries, with veins alongside of them, always run between the same muscles. The nerves are always connected with the spinal cord at the same places and continue up to the brain, always ending finally by connecting with cells in the same area in the "cortex" of the brain, that is, in the same area of the gray matter on the surface of the brain.

In our surgical operations, we depend upon this "uniformity of nature" without hesitation, and are never deceived. All these facts, with the ex-

[1] Not, observe, three lives but three phases of one life.

[2] Selected Papers and Addresses, George W. Jacobs and Co., Philadelphia.

ception of the center for speech in the gray matter of the brain, were first ascertained by experiments on the brains of animals. Let me give one striking example in a human being.

In the autumn of 1902, in a football scrimmage at the Naval Academy, when the men disentangled themselves, one of them, Midshipman Aiken, lay on the ground unconscious. Consciousness did not return until a half hour after the accident. He complained bitterly of headache, which he always located in the forehead. Mentally, he was very dull, though not comatose. His pulse was 52 instead of 72.

Soon after the accident, convulsions began, first in the right leg, for a short time; later in the right arm, this arm being finally the chief seat of the convulsions. When they were very severe, they spread also to the left side. The face was never involved.

I first saw him three days after the accident. In six and a half hours after I arrived he had twenty-four of these convulsive attacks, all limited to the right arm. They were not attended with loss of consciousness, but they greatly exhausted him. Several times it was necessary to give him chloroform.

There was no fracture of the skull. The only physical evidence of any injury was a slight bruise at the outer end of the left eyebrow.

Had I seen him before 1885 (i. e. before I became fully acquainted with the localization of the various functions in certain definite areas of the brain) I should have been unable to explain *why* the spasms were chiefly manifested in the right arm. From the various symptoms already described I should have inferred, before 1885, that the front part of the brain had been injured at the site of the bruise. Had I opened his skull at that point, I should have found a perfectly normal brain, could have done nothing more, and he would soon have died.

Experiments upon animals, however, had located precisely the portion of the gray matter on the surface of the brain which contains the cells which initiate and control the movements of the arms, legs, face, etc.

There being no fracture of the skull, the only other possible explanation of these convulsive seizures and of the

Dr. William Williams Keen was born in Philadelphia, on January 19th, 1837, during the presidency of Andrew Jackson. He will be eighty-nine years old on January 19th, 1926.

He graduated from Brown University in 1859. During his four years at Brown, Richard Olney and John Hay were fellow students. Dr. Keen was elected to the Corporation of Brown in 1873, and ex-Secretary Charles E. Hughes has been his colleague for the past twenty-two years.

He taught Anatomy and Surgery for forty-one years, as Professor of Surgery in the Women's Medical College, Philadelphia, and in his alma mater, the Jefferson Medical College, Philadelphia.

An Assistant Surgeon in the Civil War, he served again during the World War, as a Major in the Medical Reserve Corps.

He has been president of several medical and surgical societies, and was president for ten years of our oldest learned body, the American Philosophical Society, founded by Franklin in 1727.

He has received Honorary Degrees from a number of Universities in the United States, Great Britain, Canada and Sweden. In 1923, he received the degree of "Doctor, Honoris Causa" from the University of Paris.

headache and slow pulse was that one of the large blood vessels, which run over the surface of the brain in this locality, had been ruptured, and a clot had formed which pressed at first on the lower edge of the leg center, but later became larger and covered the arm center. Evidently, it was never large enough to encroach on the center for motion of the face, for that was never convulsed.

The location of this arm center was far away from the bruise. My diagnosis of the position of this supposed clot was fixed absolutely as a result of experiments upon animals. I entirely disregarded the evidence of the bruise and opened his skull over the arm center on the left side of his brain, on November 19th, 1902. When the skull was opened, the clot was found at once, its thickest point being exactly over the arm center. I removed nine tablespoonfuls of blood! One can easily imagine how great must be the pressure of two-thirds of a tumblerful of blood suddenly forced within the unyielding, bony skull, how severe the headache, how the nerve cells would be irritated and produce convulsions.

He made a perfectly smooth recovery, continued his studies in spite of my advice to take a long holiday, and graduated with his class. A few years later, in the harbor of Naples, when a fire threatened to extend to the powder magazine on one of our naval vessels, he lost his life by crawling in and extinguishing the flames, not allowing his men to go where their leader felt that duty called him.

If the parents of this brave young man, and the officers and crew of that naval vessel whose lives he saved, had been asked how many animals they would have been willing to sacrifice in order that young Aiken's life might be saved, what would have been their answer?

Could there be a clearer evidence that the dog's brain (and the same is true of the brains of other animals) and man's brain are built precisely on the same general plan? In the lower animals the plan of the brain is very simple. As we ascend in the scale of intelligence, the brains of the higher animals become more complex. In man, the brain reaches its greatest complexity, but its essential "ground plan" is the same as that of the brains of animals.

Let me use an illustration from architecture. The simplest bungalow of only one story requires only a slight foundation. It has walls, a roof, a floor, windows for light and air, a door for entrance and exit. If you add a second story, there is an additional element—stairs up to the second floor. If you enlarge this two storied bungalow to a mansion, a palace, a skyscraper, the essentials are exactly the same. The foundation for a skyscraper must consist of reinforced concrete, built on solid rock. The enlarged and more complex building only needs more walls, floors, roofs, and many stairs, doors and windows.

So in the human brain, though it is a very complex organ, the "ground plan" is identical with that of the brains of animals.

One peculiarity of the brain should also be stated. Contrary to the almost universal belief, the brain itself has *absolutely no feeling!* Handle it, cut it as you will, and a non-anesthetized patient suffers not a twinge of pain! In many operations, and especially in re-dressing wounds of the brain, I have invariably found this to be true. Patients have even joked with me while I have been handling and even cutting their brains.

Some idea of the feverish haste in the multiplication and differentiation of the cells of the body, to prepare for birth, can be gained by remembering that not only must the great nerve centers—the brain and spinal cord—but all the other internal organs, be developed and differentiated ready for use at birth. These include the liver, the kidneys, the digestive tube, the mouth, with its salivary glands, the stomach, with its glands for producing the digestive fluid, the pancreas, pouring its digestive secretion into the intestines and its insulin into the blood, and all the other contents of the abdomen and pelvis.

The same is true of the eye and the ear. Though both are of the greatest complexity, they must be and are ready for sight and hearing at birth.

Moreover, that most wonderful of all "motors," the heart, must develop

early in order to get rid of the waste of the body of the growing embryo (for all growth causes noxious waste products to accumulate in the blood) and also to provide fresh oxygen and other material for the rapid growth of the embryo. This is accomplished through the placental circulation which gives up to the mother's own blood the noxious waste products, and obtains from the mother's own blood the life-giving oxygen, etc.

While working at full speed, the heart must also make all of its own repairs without ceasing, for if it stops, life stops. How insignificant and inefficient is the best "motor" ever constructed by man, when contrasted with the heart.

The lungs, though not functioning during prenatal life, must be all ready at birth to begin their never-ceasing work during our earthly life.

In all this constant preparation for birth, the same forces of development and differentiation always work accurately in every baby that is born, both of animals and man. Organ for organ in man and animals, these various structures are similar in structure and function, with differences suited to their differing environments, climate, food, etc., and their position in the scale of animate nature. They all proclaim their great artificer—God.

The gray layer on the surface of the brain of a human baby at birth is furnished with about 9,200,000,000 cells. This is its total equipment for its life, be it a day or a hundred years. No more brain cells are added, but riotous living may destroy many. Sleep, "tired nature's sweet restorer," repairs the inroads of the day's work on the quality of these cells; hence the imperative need for regular and sufficient sleep. We can go without it up to a certain point, but then we *must* have it, and in large, generous measure. After the retreat from Mons, following the first Battle of the Marne, the men were so exhausted for want of sleep that they very often fell asleep during what must have been a very painful process of dressing severe wounds, as was noted by Dr. Crile.

All these billions upon billions of cells, and all these organs, must be manufactured by the endless multiplication of one single, fertilized cell, and in man within the short space of 280 days! What haste, urgent haste, this requires every moment! No wonder that our prenatal life is a busy one in building up our extraordinarily complex body.

And nature must see that the material for every bone and muscle and joint and nerve and blood vessel, and every organ in the head, the chest and the abdomen is provided *just at the right time,* that is, in the proper order. To provide a fully developed brain, or a stomach, or a liver, too early after fertilization, or too late for use when wanted, would not only be wasted labor and material, but would mean the death of the embryo, for it could not use them if they were developed too early, nor could it develop without them if they were developed too late.

Is not our prenatal life a wonderful evidence of the power and wisdom of God?

To think that chance, instead of an all-powerful Creator, could produce such results is an absolute impossibility, an absolute absurdity.

Our Earthy Life, in its earlier years, say until somewhat over twenty, is given over largely to the completion of our bodies. In babyhood, to feed, sleep and grow is almost our sole business. But the glimmer of beginning consciousness may be seen, as when, for instance, the baby's eyes follow a moving light. But physical growth is our chief business, i.e., providing more billions of cells in bone and marrow, muscles, heart, lungs, abdominal organs, etc.

The mind at first unfolds slowly; then as school age approaches, it begins to develop more rapidly up to early adult life. After about twenty years, the body gradually grows more slowly and ceases to grow at about twenty-five years of age. But the blood has to be busy getting rid of waste products and making repairs every day of our mortal life, especially during sleep.

What makes our bodies stop growing? Why does not one leg or one arm often grow longer than the other?[1] This is again only to be explained as due to the law or force given to the animal and

[1] Sometimes there are very slight differences in their length, but practically they are alike.

the human body by God—the Creator of every living thing "after its kind."

In adult life comes the wonderful, amazing growth of the mind—in many to a large degree; in a few to an astonishing degree; in fewer still it develops such geniuses as an Aristotle, a Caesar, Dante, Milton, Shakespeare, Galileo, Newton, Kelvin, Washington, Lincoln, down to the living geniuses, whom it would be invidious to name, but among whom several Americans would hold honored places.

The so-called Fundamentalists often object to the phrase, "the *descent* of man" from lower animals, as if "descent" indicated a lowering of the plane of the intellectual or moral life. "Descent" in evolution is used in its *genealogical* sense, as we say, "We all trace our *descent* from Adam and Eve." Certain persons are justly proud of tracing their "descent" from Benjamin Franklin, John Adams, Lafayette, etc.

The end is always Death of the Body. But to me, as I have pointed out, Death is just as natural as Birth. If one has accepted our Lord Jesus the Christ as his Divine Saviour, Death is our best friend instead of the last enemy, for it opens to us the immortal, the spiritual life.

The spiritual or disembodied life—even in our earthly lives some few exalted souls on the mountain tops of life, like St. Paul, have had glimpses of what that may be.

I believe in the immortality of man's soul as firmly as I do in the mortality of man's body.

Consider first the words of the Scriptures. The New Testament, especially, is shot through with "Immortal Life," "brought Life and Immortality to light," "Eternal Life," "Everlasting Life," "shall never die." Consider more especially Jesus's promise to the penitent thief. "To-day shalt thou be with me in Paradise."[1]

Again and again, He also promised Everlasting Life to those who believe in Him. Chapters V, VI and VII of St. John's Gospel teem with "Eternal Life." See also Chapters XI, 26, and XVII, 3.

The problem of the whole human race who lived in the centuries before the birth of Jesus, and of the peoples since His birth who have never heard His blessed name, I leave to an all-merciful God, confident that He will deal justice and mercy to all the human being He has made. I am sure that we shall learn all about it in the Next World.

Meanwhile our clear duty is to send to these benighted peoples the blessed Gospel—the Good News—that Jesus, the Son of God and our Saviour, has lived and died for all mankind, so that they may learn to love and obey Him and attain Everlasting Life in the presence of God.

I repeat my assertion, and with all the greater confidence because of having written these lines—I feel as sure of this Immortal, Spiritual Life as I do of the unquestionable fact that I am alive on the earth to-day. Death, to those who thus believe and love our Lord, has no terrors. It is as natural as Birth, and to be welcomed far more than Birth—its corresponding companion—for it opens the gates of the Immortal Life.

Science stops at death, for "science" means what we "know" and can "prove," and we have no certain, scientific cognizance of life after death. But science also cannot deny it any more than it can affirm it.

But faith outstrips science. Every intelligent human being *knows* as one of the postulates of life that there is within him a self, an ego, an I, a something different from all his bodily organs and functions. This, like mathematical axioms, has no need of "proof," for there is nothing more evidently true than such axioms or postulates. Some persons realize this more strongly than others—some few, alas! have not this delectable conviction. But the mass of intelligent people do recognize that their "soul" or "spirit" is wholly different from, though con-

[1] Prof. Enslin, Professor of Greek in the Crozer Theological Seminary, writes me that the word Paradeisos (Greek) or Paradise (English) originally meant a hunting "preserve" or "park." It is probably of Persian origin. Later its general use in Greek designated any park or grove used for pleasure. In contemporary Jewish use in the time of Christ, it was used "to designate the abode of the righteous between death and the resurrection." It was constantly spoken of as above us in the heavens. It was believed to be an abode of bliss and was a *different world* from our earthly world. It therefore indicated a new and happier life beyond our earthly life. It does not mean "Sheol" or "Hades."

nected with, their bodies. It cannot be seen, be measured, or be weighed—it is one of the "imponderables" which Bismarck warned his countrymen must be taken into account.

Even untutored savage races evidently believe in Life after Death for they bury food, weapons of the chase, and other necessities for this future life.

The Apostle John (III, 5) makes clear this distinction of the body and the spirit: "What is born of the flesh is flesh, and what is born of the spirit is spirit."

One serious caution must always be clearly stated. Religious faith is one of the most intense emotions which stir the human soul. It has, therefore, one great danger—that unless we are always on our guard, it may easily degenerate into superstition, as I have seen, for example, in India, Japan and Spain.

Moreover, God is surely a reasonable Being. To create man with such great intellectual and spiritual powers, as I have already indicated, and then to "snuff them out" in a moment by death, is utterly unreasonable. God is a wise as well as an omnipotent Being. To my mind, our souls *must* continue to live in the Spiritual Life. Utterly to destroy them is to me unthinkable. Logic as well as faith combine to say, "We *must* be Immortal."

By this faith in our own spirit or soul, and by cultivating this spiritual life during our earthly life, we can fit ourselves the better to enjoy the Life after Death. No better means of culture can be devised than the endeavor to approach as nearly as may be to the teachings of Jesus, especially as embodied in that most wonderful of all sermons—the Sermon on the Mount (Matt. V, VI, and VII).

And what a glorious world that Future World will be! Free from all the physical and mental bonds of this world, our spirits will soar into the empyrean splendor of His Presence. How eager we shall be to learn the solution of the many earthly problems which have troubled the sense of justice in our finite minds—afflictions, poverty, crime, malign influence in the home, drunkenness, the defective classes of human beings (for nature's orderly processes occasionally do go awry) who, struggle as they may, cannot keep up with the pace of the thronging multitudes. All these, and many more such dark problems in this world will then be clear to our unchained spiritual powers.

When we look upon the forms of our beloved dead, we clearly recognize that the dear body is only the casket; the jewel has been transferred to another and better realm. The soul, the spirit, the real personality who had lived with us in sweet communion, who had soothed us in sickness, had comforted us in sorrow, and had shared our joys, has taken wings and still lives in the Spiritual Life, awaiting our coming! Parted husbands and wives, parents and children, all down the line of relationship and friendship, will be with us "forever with the Lord." How joyously we, in turn, shall welcome those from whom for a time we have been separated by death.

What an alluring, entrancing, enticing vision! I pity any human being who cannot realize this beautiful faith.

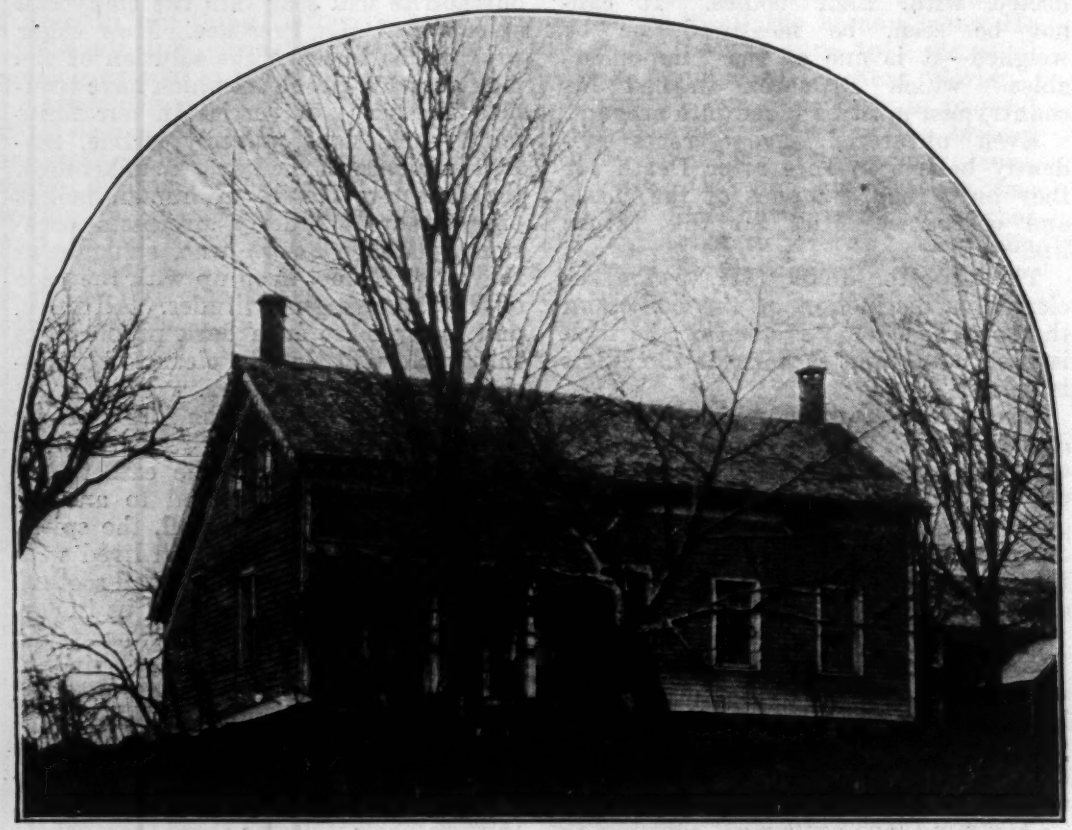
"Only speculation, only guesses," you cry? If so, again I go back to the Book of Books—"To-day shalt thou be *with Me in Paradise,*" and all the other positive promises of our Lord which I have already quoted. And not a jot or tittle of His promises shall be unfulfilled.

This, then, is my belief in Man's Triple Life—a splendid Evolution, ever upwards and onwards.

"Wherefore, comfort one another with these words!"

Socialism is autocracy carried into social and economic organization.

It never can be permanent because autocracy can never be permanent.



Birthplace of Owen D. Young at Van Hornesville, New York.

OWEN D. YOUNG

The New Type of America's Industrial Genius

An Interview

By HERMAN BERNSTEIN

SIX feet two, slim, long-limbed, slow and casual in his movements, with keen dark eyes that penetrate with a kindly smile, Owen D. Young is not only the foremost new industrialist leader in America, but he is also one of America's few farsighted, constructive statesmen, whose vision is matched by his courage, and whose idealism is backed by his practical knowledge of the world.

Owen D. Young was born on October 27th, 1874, at Van Hornesville, Herkimer County, New York, the son of farmers whose ancestors had been farming at Van Hornesville since the middle of the eighteenth century. He spent his first fifteen years on his father's farm, doing the usual chores, and getting his early education at the local schools. Later he studied at the Academy of East Springfield and at fifteen he was ready to enter college. He was anxious to study law, but financially his parents were not in position to gratify the boy's ambition.

They succeeded, however, in obtaining a loan of $1,000, which enabled them to send their boy to St. Lawrence University, at Canton, N. Y., where he graduated in 1894. He then resumed his studies at the Boston University Law School for two years, supporting himself by working as librarian of the Law Library and by tutoring some of his fellow students. He was admitted to the bar in 1896 and immediately commenced to practice in the law office of Charles H. Tyler.

In 1898 he married Josephine Sheldon. They have one daughter, four sons and a grandson one year old. Within a few years he became a member of the law firm of Tyler and Young. He lectured in the Boston University School in the evenings. Among his clients was the firm of Stone and Webster, electrical engineers, and by handling several important litigations in which they were concerned, Mr. Young became intimately familiar with the public utility business. On several occasions he appeared in suits in which the General Electric Company was involved. When the chief counsel of the General Electric Company, Hinsdale Parsons, died in 1912, Mr. Young was invited by Mr. Charles A. Coffin, then president of the company, to come to New York. In 1922 he was chosen chairman of the Board of Directors.

One stormy winter night in 1923 he went to Schenectady with Mr. Gerard Swope, the President of the General Electric Company, to meet the Foremen's Association of the company, and to be looked over by the men.

He was asked to say a few words to the men. He spoke to them extemporaneously and his frankness won their love.

"The new era opening before us depends upon the spirit in which *we* tackle the job," he said to them.

He emphasized the need for closer cooperation between the management and the employees. He told them that the General Electric Company belonged to every one who contributed to it, whether it be labor, brains, engineering, technical or scientific knowledge, or the stockholders who contributed the capital. He mentioned the fact that more than one-half of the stockholders were women, and provoked laughter when he declared that all the men in the Company were working for women, both in the shop and at home.

"Could there be a better commentary on the company than the fact that women should place such confidence in the organization that they are willing to invest their savings in the securities of our company?" he asked.

He compared his own job and that of Mr. Swope, the then newly elected President, to the piloting of a huge ocean liner. It was his job, he said, to be on the bridge, look out ahead, and steer a clear course. Mr. Swope's job was to see that the ship was adequately manned and that all of the machinery inside the liner was kept in the best working order.

On that occasion he made a characteristic remark regarding the value of silence and of speech.

"Silence," he said, "is both valuable and dangerous. A man who speaks in anger, in ignorance, or with impatience runs the danger of being irresponsible in his assertions, and may thereby do irreparable damage. To withhold a word when it should be spoken would be equally criminal."

Those who know Mr. Young intimately say that, when others argue and wrangle, he usually sits by smilingly, and when a deadlock is reached he makes a suggestion, or analyzes a situation in a few words which point the way out of the difficulty. Even in his youth he seemed to possess this same quality, for one who knew him as a student at the St. Lawrence University describes him thus:

"He was a slow-moving fellow with six feet or more of physical and a million feet of mental up-and-downness. Physically he was thin, mentally he was never thin, but broad. He moved slowly, walked loosely as though there were plenty of time to get to the place he was going to, but even if he started late he always got there a little ahead of time. Even when he appeared to be standing still he was going ahead, and when others were waving their hands or talking, he would sit still and just smile. He was always getting somewhere, for before the others arrived at a conclusion he would say just a few words, and there

you had it—a mature conclusion from an elongated youngster, but one that in a few minutes would have the approval of the arguers."

Addressing informally an advertising conference of the General Electric Company, he made the following typical remarks which illustrate his attitude toward the organization whose policies he directs:

"I never sit at any meeting of a great group of men in the General Electric Company, whether it be advertising, or engineering, or general policy, but I feel humble at the office that I hold, grateful to the men who have afforded me that opportunity, full of pride of this organization because I believe it to be, sincerely believe it to be, the greatest aggregation of human beings of talent which the world has ever seen, because this great organization after all represents only a period of a few years back, for this electrical industry appealed to the imagination of the ablest brains of the world, because it was a new art, and it sucked into itself the ablest brains of this generation.

"I have heard it frequently said that this was a great, impersonal, cold organization of tremendous power. I wish with all my heart that the 110,000,000 people of the United States might have looked upon this gathering to-night and seen these men around this table with the human relations which exist here, and if they could have looked in, we wouldn't have had to discuss advertising. For after all, great as research and engineering and manufacturing may be, perfect as they may be, the most vital factor is in the underlying human relations among men. There is no substitute for that. Research is no substitute; engineering is no substitute; manufacturing is no substitute; sales is no substitute for the contacts of human beings, and if the contacts of human beings with this organization are right, if the 100,000 people within this organization have the right feeling of personal human contact, and get out of their minds that this is a great Wall Street institution, but that it is a great aggregation of human beings trying to do their service for the world, only incidentally getting the capital to do it, not primarily, then we shall succeed, and if the 100,000 people in this organization are convinced of that feeling, the 110,000,000 of the United States will be convinced of it.

"If you stand well with your neighbors, and still are the common variety of human being, you really have achieved the maximum for a man to achieve in the world."

While Marconi and De Forest are styled the fathers of radio, Owen D. Young has done more than any man for the coordination and the development of radio by organizing and directing the Radio Corporation of America. Mr. Young was one of the first to recognize the universal possibilities of radio and to unify the conflicting interests, thus enabling radio to change from being a fascinating plaything into a great practical force throughout the world. It was a gigantic task to combine the competing interests which interfered with one another. And Owen D. Young accomplished it by virtue of his extraordinary resourcefulness, common-sense diplomacy and organization genius.

The Radio Corporation of America was the outgrowth of the efforts of the British Marconi Company to purchase the patents to the famous high-frequency alternator, developed by E. F. W. Alexanderson, the research engineer of the General Electric Company. Since that machine had virtually revolutionized transmission methods in radio telegraphy, the right to build and use it involved control of this means of communication all over the world. Having considered the eagerness of the Marconi Company to obtain this invention and the numerous protests from prominent United States Navy officials against selling what was regarded as the technical control of radio communication to an alien corporation, Mr. Young organized the Radio Corporation of America in 1919. As chairman of the board of directors, he effected the purchase of the controlling interest in the American Marconi Company, and obtained the active cooperation and financial support of the General Electric Company, the American Telephone and Telegraph, the United Fruit Company and the Westinghouse Company. These organizations had

Owen D. Young

owned rights to various devices necessary for a full development of radio communication, and the combined organization has at its disposal the most brilliant inventive geniuses and the finest engineering skill obtainable. Thus the United States became supreme in the field of radio development.

In 1919 Mr. Young was appointed a member of the Second Industrial Conference called by President Wilson. In 1922 he was appointed by President Harding Chairman of the Committee on Business Cycles and Unemployment. That same year Mr. Young was made chairman of the American group in the International Court of Arbitration of Trade Disputes, a tribunal organized by the International Chamber of Commerce to adjust disputes between persons and firms engaged in international commerce.

It was at this junction in Mr. Young's career that he first became publicly well known. Up to that point, as the administrator of the two leading companies in the electrical and radio industries, he was gaining recognition as one of the foremost industrialists in the United States. Because of his deep interest in semi-public affairs he was known to many familiar with specific subjects of inquiry; but it was his entrance into a new field of accomplishment that soon won for him universal admiration and affection throughout the world. This occurred in 1923 when he accepted the invitation from the Reparations Commission in Paris to act as one of two Americans on the first committee of experts, afterward known as the Dawes Committee.

Mr. Young gives full credit to General Dawes for his contribution toward

what is universally known as the Dawes Plan, but it is generally admitted that Mr. Young was one of the most constructive authors of that intricate plan which has saved Europe from her downward slide. Mr. Young himself describes his share in the Dawes Committee with his usual modesty:

"I remember sometime during the first two weeks in Paris when the name 'Experts Committee' was gradually giving way to the name of 'Dawes Committee' and when things did not look very hopeful, General Dawes said, 'well, let them call it the Dawes Committee. Some one has to stand up and take the garbage or the garlands.' At that time, when the name 'Dawes' became attached to the Committee, it looked as if the bouquets would all be of the backdoor variety.

"Every one of my industrial associates knows that his business is composed of two important departments and that the men who are successful in one seldom are qualified for the other. One is manufacturing, the other is sales. It is not enough to manufacture a product, even a good product. It must be sold. The installation speech of General Dawes which was published in full in the newspapers of all the principal countries of the world created at once a change in the public opinion of Europe. His directness, his clearness, his determination and his courage suddenly dispelled despair and doubt and gave hope and confidence to the masses of Europe and a feeling of pride to the people of America. From that time on, the Committee was no longer the Experts Committee, it was the Dawes Committee. The man with the pipe, who was unafraid, won.

"Politicians of countries knew well how to get away with an 'experts' report. They looked with anxiety on the approaching Dawes report. The point I desire to make is that the Committee followed the best commercial and financial practise by having its goods sold before they were manufactured. In the language of the advertiser a 'consumer demand' was built up for the Dawes Plan before anybody knew what it was to be and before a line of it had been put on paper. General Dawes was the Sales Department of our concern. In that department he had no assistants or associates and he needed none. The greatest contribution of any individual member of the Committee was made by General Dawes. The remaining members of the Committee, with General Dawes as leader, were all in the manufacturing department. We made our product conscientiously and with the best knowledge and skill at our disposal. Each national delegation had its aides, experts and assistants, and from them came guiding information and helpful suggestions. With a manufacturing department thus set, it would have been a reflection indeed if we could not have made a relatively simple article which would meet the requirements of a well advertised market already prepared to receive it. . . . .

"There was one specification of the plan which the Committee always had in mind. It was this specification which made it a practical success. When I am in the country, my chief occupation is to trade cows with my neighbors. Just before I left for Europe, having spent a whole of an arduous morning in a most difficult negotiation, I said to my neighbor as he seemed about to leave: 'Abe, will you buy that cow?' His answer was, 'Well, she's most too dear to take and she's most too cheap to leave.' The plan had to be such that, when put to the interested countries, each would feel that though it was most too dear to take, it was most too cheap to leave . . . ."

In 1924 Mr. Young was invited to attend the conference of Premiers in London and he participated in their deliberations for the purpose of making the Dawes Plan an operative reality. He was the only universal choice of the representatives of both the Allies and of Germany as Agent General for Reparations Payments *ad interim*. For several months he devoted himself to the task of inaugurating the operation of the Dawes Plan, and resigned only after the machinery had been perfected. Mr. S. Parker Gilbert was then designated Agent General for Reparations.

Mr. Young is a director of the Federal Reserve Bank of New York, a member of the Board of Directors of the Adirondack Power and Light Corporation, Mohawk Hudson Power Corporation, Buffalo General Electric Company, the General Motors Corporation and the International General Electric Company.

He is also president of the board of trustees of St. Lawrence University, and president of the board of trustees of the Endowment Fund for the Walter Hines Page School of International Relations at Johns Hopkins University. He has been decorated by the French, Belgian, Japanese and German governments for the constructive services which he has rendered to their countries, and has received numerous honorary degrees from American universities.

On receiving his honorary degree from Yale University, Mr. Young discussed America's role among the nations of the world, and concluded with the following striking passage:

"Once upon a time Jesus was asked by a wily lawyer, 'Who is my neighbor?' and Jesus answered in a parable of a certain Jew who, traveling from Jerusalem to Jericho, was stripped, robbed, wounded and left half dead. The first who came by was a priest. He and a Levite also, seeing him, passed by on the other side. But a Samaritan bound up his wounds, poured wine into his parched lips, and when sufficiently recovered, placed him on his own beast, accompanied him to the inn, and left him in charge of the host, giving money and promising more on his return. Then Jesus asked the lawyer, 'Which of the three was his neighbor?' The lawyer answered, 'He who showed mercy.' Then said Jesus, 'Go and do thou likewise.'

"I appeal to the prejudices of none but to the sympathy of all. I speak in the interest of America. Let this great country accept her responsibilities commensurate with her blessings. Let her great strength and great power be not paralyzed in her own isolation and selfishness, but he exercised so as to insure the safety of her future which lies in the welfare of the world."

In every big problem affecting men and affairs, as in all lesser problems, he seems to seek the facts first of all. Without this knowledge he feels that no accurate conclusions can be reached.

Mr. Young does not believe in loose talk. He thinks and talks clearly. He realizes the responsibility that rests upon leaders of men, and he believes that words without being backed up by responsibility are often worthless, and sometimes even dangerous.

When I asked him for his opinion of the present situation in Europe and whether the statesmen were dealing with the new problems adequately, he remarked that it was useless to talk about things without being charged with the responsibility for doing them, that he never believed in volunteering advice regarding work that is being done by others. He explained that, if he had the responsibility, he might decide to do something different from what he would say if he had no such responsibility. Reality often causes us to make decisions that we might not think of if we merely discussed the same questions academically.

"What sort of an article do you think you would have if I answered all your questions?" he asked with a smile.

"An article that would make a sensation without being sensational."

He sat for a few minutes absorbed in thought, smoking his cigar and looking into the distance. Finally he said:

"I can tell you what I am interested in. Perhaps that will interest you."

Then he spoke slowly, with the eloquence of tested truth. He spoke of how the Dawes plan was practically forced upon the politicians of Europe by the fact that the people everywhere had first been won over by the qualities of the plan. He pointed out that politicians cannot deal honestly and fearlessly with vital economic problems or international questions because they must face their constituents at elections and they know that they would be defeated and punished for initiating or advocating issues that are unpopular, however constructive or beneficial such issues might really be. He discussed the crying need for facts in determining the causes of war, in order that wars may be outlawed in the future. He spoke of the various functions of industry, of the development of power, of the improvement in the life of the producer in the cities and of the electrification of the farm, for the purpose of banishing drudgery and despair from the farmer's home. He also gave his views on capitalism and communism.

Owen D. Young is profoundly interested in all these problems and is quietly working for their solution.

Mr. Young does not always take himself seriously. On one occasion he remarked:

"Half the time when I look as if I'm thinking, I'm only 'setting.' I just 'set' better than anybody you ever saw."

Mr. Young directs the course of policy of the General Electric Company, with which about 100,000 men are associated, and of the Radio Corporation of America, the greatest radio organization in the world. As the guiding spirit of these institutions, harnessing the air, the inventive and constructive genius of the world, he is working for coordination, for happier homes and for peace.

This great industrialist came from the farm. His ancestors were farmers. He lived and worked on the farm, where he acquired his simple, rugged philosophy which aids him in his decisions of weightiest problems. He knows that you cannot fool nature, or violate its laws with immunity. He knows that you must deal with fundamentals, with facts, and make your theories fit the facts rather than juggle with facts to fit your pet theories.

In my interview with him and in his significant utterances on important occasions, he has given free expression to his views on numerous vital problems with which America and other nations are confronted. Here are crystalized his ideas and ideals.

"One of the things that interest me most," he said to me, "is the Page School of International Relations. I believe that no political agency can adjust important international problems. No politicians can solve them. No politicians will dare raise an unpopular issue, however good they believe it to be. For instance, the Japanese question cannot be handled honestly and conscientiously by a politician on the Coast. Suppose that a politician on the Coast became convinced that Japan, having a small area, was justified in seeking new territory for the settlement of part of her population which is starving. What would happen to the politician on the Coast if he were to advocate a policy of liberal immigration for the Japanese? He knows that he would be repudiated at the polls, and therefore he would not dare initiate any unpopular policy even if he actually believed that it was in the best interests of the American people.

"The same is true of Europe. M. Poincaré, for instance, remained in power mainly because he said: 'Germany can pay billions of marks, and we will put our army into the Ruhr to make her pay.' Poincaré is a very sensible man, and I can hardly conceive that he did not know Germany could not pay that, with or without the occupation of the Ruhr. But he knew that as a politician his fate would be sealed if he pursued the policy that common sense and truth dictated.

"Mr. Lloyd George had a similar experience in England. As a politician, depending upon the votes of the people, he realized how fatal certain just and necessary policies would prove to his political safety.

"The Dawes Plan was worked out by a non-political, nonpartisan group. That is why it dared to go to the root of the matter, to face the truth, with out fear or favor. Then, after the plan had been 'sold' to the nations, the politicians were forced by the people themselves to adopt it. The politicians could not return home to their constituents without advocating the plan, because the people were in favor of it.

"What we need most are *facts, not propaganda.* And facts are the strongest antidote to propaganda.

"Let us first of all find out the facts —the facts about the causes of war— instead of trying to fit certain facts into our theories. Let us then base our theories on the facts. I hope that war can be prevented, just as peace was prevented. I feel sure it can. The Page School is established for the purpose of ascertaining the facts with regard to the causes of war. But if the facts ascertained should show that war cannot be prevented, I would have to adopt the facts rather than my theories.

"Politicians are handicapped in dealing with international problems. I believe in the importance of an impartial fact-finding body that is set up to deal with these problems and present the facts first. Just as scientists are working on diseases and ailments of the body, so the international problems of war and peace should be studied, an-

Owen D. Young's present home at Van Hornesville, New York.

alyzed, investigated, and then the remedy may be found.

"As I have pointed out, a great body of information must be created and mobilized in some single place about all the questions which affect international relations. Some of these problems are economic, some are embedded in racial psychology, some of them are historical, some are geographical, some are military and some partake of two or more of these origins. The Page School will become such a place. Guided by professors of distinction, research workers will accumulate this information by study or from original sources. These men will gather the facts about international trade, racial psychology, commercial and military geography, diplomatic usage and experience, effects of artificial economic barriers upon international amity, effects of new inventions to expedite communication, and all the hundreds of things that enter into the contacts of nation with nation. These facts will be digested, systematized, cross-referenced, analyzed and made accessible and intelligible to everybody who needs to know them. The men who do this research work will become experts in international problems. Some of them will continue their service in pure research as a life career. Others will be teachers of the science. Others will be drafted into Government service.

"We have what one might call an industry of foreign relations, but we have no art. We have a trade, but we have no science. We have misinformation where we should have information. We have a desire for peace, but we have not established an agency whose exclusive duty it is to study how to get it.

"We desire to outlaw war. Not so long ago we desired to outlaw the yellow fever. We desired to outlaw typhoid. We desired to outlaw diphtheria. We desired to shake off the enervating shackles of the hookworm. For centuries before, men had

prayed and suffered. And the plague and yellow fever, typhoid and diphtheria, the hookworm and malaria are outlawed in the world to-day.

"Disease in international relations must be destroyed. The health of the world must be guaranteed. This must be done by preventative research rather than by the surgery of war.

"If, in the evolution of the nations, we have become the creditor of the world, then we shall have to face that fact and act with the responsibility and intelligence which the situation imposes. If our command of natural resources, inventive genius, productive application are to be exercised for the benefit and safety of the world, then we must learn how to do it. If our leadership is such that we may be the strongest force in the world for peace, then God be with us if we fail. In any event let us try to learn.

"Military men and engineers have delved into the secrets of every science and even created a science of their own in order that they might succeed in war. Suppose we marshall the resources of science and mobilize its results in order that we may succeed in peace.

"In the international field, the limitation of our knowledge, the diversity of conditions and their rapid change, the difficulty of applying fundamental principles, and the wide controversial area of the unknown, all encourage us to debate and not to act. They encourage us to listen to the big program of the doctrinaire, to see the answer to the final question rather than to get experience in the small field of the experimenter. We are ambitious to debate great programs to the last detail rather than to accept the smaller and more practical program and learn by trial and error. Certainly the experience in the international field shows that debates, however desirable as a method of getting at the truth, have their limitations. When they become so heated that they are promoters of controversy rather than developers of knowledge, then debates become harmful, and it is time for action. Under such circumstances we must be only in a limited area, provided always it be a step in the right direction and be adapted toward getting new and more accurate information. Let us do the thing before us to do even though it be small. Let us get our growth from experience and anchor our discussion to practical programs instead of soaring into that rarified atmosphere where all undertakings die. . . . .

"The whole world is throwing out an anguished cry for peace now that the debauch of war is over. We look at its cost with the depression of the morning after. We see the flower of a whole generation using our advances in the arts and industry to destroy each other without even the thrilling pageantry that formerly went with war. Our desolated homes, our economic burdens, our human losses, all lead to the prayers and cries for a united world, to outlaw war. But what are the practical things we are doing? Prayers, and longing, and debate must be supplemented by action and we do not act. We delay joining a World Court, while we debate the question of national sovereignty and endeavor to show that the principles of international jurisprudence are not sufficiently worked out to warrant our taking the alleged risk. Just as if international jurisprudence ever would be worked out until we develop, through trial and even error, those principles of the real cases which require practical decision. In that way our common law has grown and is growing. In that way our international law will grow. Let the debates and education go on. I am not decrying their value, but I say let us supplement them with action, carefully and wisely taken, but *action*. Let us join a World Court. Let us get our experience and strengthen these international peace agencies in order that they may be strong to meet the issues of the future in a new generation which will not itself have experienced the horrors of war as we have done."

Discussing the functions of industry, Mr. Young said to me:

"There are three functions of industrial mechanism.

"First, our duty to the investors. We must create and secure the tools to carry on the industries—capital. We must make it a safe and profitable investment, so that the investors would flock with their money whenever re-

An exact duplicate of the grade school Owen D. Young attended, rebuilt on the same spot, after the original had burned down.

quired. We must make it safer and more profitable than other investments. Then our duty to the investors is done.

"Second, our duty to the public. We must give them the best article at the most accessible price; so that the buying public is thoroughly satisfied, both with the quality and the price of the article. Then our duty to the public is discharged.

"Third, our duty to the thousands of people who create the product. As manager I consider myself one of these —one of the workmen. Of course, we must have discipline. After the first two duties are successfully discharged, the rest really belongs to the third, to those who produce, who create. But each one of us must give to his work the best there is in him.

"The General Electric Company is an institution, like a university or a state, built for permanency, not like some other business for over night.

"We must go on developing and multiplying power. I am most unhappy when I see the streams of water that are wasted.

"When I see a stream running down the hill, I am jealous of its wasted power. On all sides we hear of the conservation of waste and of the great savings which might be made. Yet the greatest waste of power to light our homes, to run our mills, to ease the burdens of thousands of factory workers, goes on with but little concern given to it. I am interested in increasing power, for that is what will improve our life and will give more comforts to the largest number of people.

"I have always contended that if one will take account of the wage curves of the world and the power production curves of the world, he will find that they go pretty much hand in hand. Low wages prevail where there is very little power production, and the highest wages prevail where there is a maximum of power production. To the extent to which you can make the individual man a director of power, you can make him more of a producer, and accordingly more of a contributor to the wealth of the world.

"This is the only thing, in my judgment, which will enable America to maintain its present high level of wages, compared with the wages of the rest of the world. Fortunately we have the capital in this country which we can put into the further de-

velopment of water power; we have the capital with which we can purchase the machinery to do the work. I feel that to the extent that we can direct our resources to the further development of a greater power supply, and make the workers more and more directors of great powers, the wages of the people of this country can be maintained or possibly even raised. It is by this means alone that we can maintain our competitive position with the other countries of the world."

Referring to the marvels of the radio, Mr. Young said: "I saw it when others thought it was but a plaything, a dream. And one of the great advantages of the radio is also the dissemination of facts, in our daily life. When the President of the United States speaks the whole nation can hear him. We do not have to depend upon the printed word alone. The people can now be reached directly through the radio when any important problem is to be presented to them."

"But what of propaganda through the radio?" I asked. "What if the radio be used for the dissemination of misinformation?"

"Every new invention, however useful, may be employed for destructive purposes," Mr. Young replied. "But it is essential to direct the radio so that it shall become a disseminator of more facts. Facts, realities, are the things that count most. And we are doing all in our power to use the radio for this purpose."

Answering my question regarding the communist experiment in Russia, Mr. Young said:

"I do not get red in the face or excited when I hear the words communism or bolshevism or socialism. I judge the industrial machine by facts. I do not say that the machine of capitalism is perfect a hundred per cent. I do not say this is God-given, while the other comes from the devil. I say this machine has been tested and found the best that the human mind has as yet perfected. We must, of course, go on improving it. We must increase its efficiency, but it would be folly to say that this machine should be discarded for another machine, which has been tested and found wanting wherever tried. It has thus far failed to produce satisfactory results. And we judge by results. Let us all cooperate in making our present system more humane, efficient and productive."

One of Mr. Young's pet interests is the electrification of the farm. He is attached to the farm, he knows the farmer's needs and is devoting much thought toward the farmer's problems. Discussing these, Mr. Young said:

"I was born on a New York State farm, in a remote agricultural district, fifteen miles from a railroad. I worked on that farm until I was twenty-one years old. Out of doors we had no power except man power and natural horse power, and indoors nothing but grinding drudgery imposed on my mother for unconscionably long hours every day. There were no milking machines; there were no milk separators; there were no power churns; there were no power pumps; there were no silage cutters; there were no washing machines; there were no vacuum cleaners; there were no electric flatirons; there were no electric lights; there were no telephones; there were no automobiles; there were no radios. The weekly and semi-weekly newspapers were the communicators of intelligence. Muscles of human beings and of horses were the generators of power, and operated through the greater part of the year every day to the point of exhaustion. These are the recollections of my youth. For the last twenty-five years I have operated the same farm.

"Later, I became a practising lawyer in Boston and devoted the greater part of my time and study to the problems of electric light and power companies. This industry was just then emerging from its infant diseases, resulting from poor technic, bad financing, and unsatisfactory franchises by unwise methods. For fifteen years I devoted myself to the study of the light and power business, during which time it was establishing itself as a real instrument of public service. For the past twelve years I have been connected with a great electrical manufacturing company and have had the opportunity to observe its field and study its problems. Consequently, I may say that I am a farmer; that I am familiar with the light and power business; and that I have some knowledge of electrical

manufacturing. The electrification of the farm requires the cooperative effort of all three—the farmer, the electric light and power company, and perhaps most of all, the electrical manufacturer.

"Farms must be made attractive as a place to live, and profitable as a business. Their produce must be made as abundant and cheap as modern devices and inventive genius can make them, in order to guarantee our food supply. As a social problem, life on the farm, and particularly in the farm houses, must be relieved of its exhausting drudgery through the application of electric power, just as we have relieved its desolation and lonesomeness by the telephone, the automobile, and most of all, by the radio.

"The farm can be and is being made the best of all places in the world to live. The business of farming must be made to yield profits commensurate with other business. I welcome that Monday morning when the electrically driven milking machine shall have milked the cows; the electrically driven separator shall have produced the cream; the electrically driven churn shall have made the butter. At the same time, in the house the electrically driven washing machine shall be doing its work while breakfast goes on and we shall have sunny, bright, and happy Mondays in place of the old blue ones. And they were blue, and rightly blue in the old days, with the milk coming into the house from the barn; with the skimming to be done, and the pans and buckets to be washed; with the churn waiting; with the washboiler on the stove while the washtub and its back-breaking device, the washboard, stood by; with the kitchen full of steam, the breakfast cooking and one pale, tired, and discouraged woman in the midst of this confusion. Hungry men were at the door anxious to get at the day's work. Blue were those Mondays indeed. Perhaps, on these new and brighter Mondays, we might even picture the radio bringing in the jazz on Monday morning and the housewife taking a turn or two around the table just to celebrate her happiness in the new day.

"Nowhere else in the world are there such resources of water power contiguous to so great a market as in New York State. The God-given storage of the Great Lakes and the drainage area of half a continent is collecting water and equalizing its flow over the falls of Niagara and down the rapids of the St. Lawrence, all for the economic benefit of the State of New York. All we have to do is to take advantage of it. Nature has done her share. Relatively small developments have been made. Millions of horsepower run to waste every year.

"And why is all this power waste? Because the people have permitted this great economic question to become a political football.

"When gold is discovered in Alaska, the front pages of the newspapers are filled, and thousands of men from all countries rush to dig it out and increase their wealth. Yet here we let gross values larger than all the gold in the world run to waste. These we could conserve for the benefit of the people; for the farmer in better markets; for the workmen in better wages; for the industries in larger and more adequate power; for the railroads in better transportation.

"The people should demand that this economic proposition be dealt with on an economic and sensible basis; that the powers be made available, and that we substitute economic progress for political horseplay. . . .

"I have had some experience both in this country and abroad in seeing politicians attempt to handle economic problems. And I have seen them fail."

UNEVENTS

Oh, God, keep me from a quiet life
Beside a singing kettle and a closed door;
Give me windy freedom and the joyous strife,
Not dreams while I am sweeping up the floor.

—*Jean McClure.*

THE BRASS BOX

By EDMUND SNELL

Illustrated by O. F. Schmidt

THERE was only one man in Borneo who knew what went on behind the faded silk curtains at the back of Sui-Chong's shop in the coolie-lines of the Lembanis Estate and even he, it will be seen, did not know everything.

Lavery met the third assistant on his way down. It chanced to be the last day of the month—the day upon which Bernard Moffat drew every cent that was due to him with unfailing regularity.

"Hullo, Moffat! What's the hurry?"

The other paused. He was a tallish youth of anything between twenty-five and thirty, with handsome—almost effeminate—features tanned by a discriminating tropic sun to exactly the right shade. His suit of white duck, although shamefully neglected by its wearer, bore the unmistakable stamp of a West End tailor. His topee had an almost imperceptible tilt to the left and his malacca boasted a crook and a faint gold band. He never employed his stick either for walking or chastisement, its permanent position being over one arm. The fact that the ferrule was missing and the lower extremity frayed appeared to have escaped his notice.

"Hullo, old bean!" Here again, in his disregard for the first assistant's superior position, Moffat was unique. "Just off to Sui-Chong's. A queer feeling in my throat has just indicated a lack of moisture. Care to join me?" Lavery shook his head.

"No thanks. Chong can't manage anything but lager and *sam-su;* besides it's barely half an hour to sundown. If you can screw up a little self-control, stroll up to my place and have a man's drink!"

For a fraction of a second Moffat appeared to reflect. He glanced furtively towards Sui-Chong's store—a ramshackle conglomeration of wooden uprights and sago-leaves—then let his eyes rest on the distant roof of Lavery's bungalow, just showing between the trees a mile away.

"If you don't mind, old son, I'm clinging to my original proposition."

The first assistant had expected this, but for some reason or other the younger man's refusal irritated him.

"Look here, Moffat, I've been wanting to tell you a few home truths for some time past. I suppose it's no affair of mine whether you make a fool of yourself or whether you don't; but there are limits to everything, you know, and—well—you're drinking a deuced sight too much."

A queer glint crept into the third assistant's eye.

"Ever seen me drunk?"

"Not exactly, but pretty near it." He dropped a hand to Moffat's shoulder. "If you weren't so confoundedly decent under all this tomfoolery, I wouldn't bother myself about you. You've the makings of a first-rate planter if you'd only pull yourself together. Man alive, can't you see what chances you're chucking away?"

At that moment Moffat did rather an unusual thing. He removed the cane from his arm, holding it in his left hand, began tracing irregular, intersecting circles in the dust at his feet.

"It's no go, old bean," he said quietly. "I've burned my jolly old boats behind me long ago. All that I can do—all, I fancy, that I want to do—is to jog along in the little rut I've made for myself. It's mighty good of you to try and knock sense into me—and I appreciate it; but I've got to that stage when it's easier to accumulate debts than pay 'em, and I'm taking the line of least resistance."

Lavery scratched his chin.

"What do they amount to?"

The third assistant slashed suddenly

"I love you, Tuan Moffat," she said simply, "but you are a fool nevertheless."

at an imaginary object and laughed aloud, a laugh that seemed to dispel effectively the gloom that had momentarily obsessed him.

"Ask me something easier! I haven't a notion."

Lavery jerked up his head. There were many sides to the other's character that completely baffled him.

"You don't know what you owe?"

"No."

"But approximately——?"

"I couldn't tell you within a thousand dollars. To tell you the truth, I'm off to Sui-Chong's to kill two birds with one stone—to quench my thirst and find out the extent of my liabilities."

The first assistant heaved a sigh of relief. To show an intelligent interest in his financial affairs suggested at least a glimmering of conscience.

"I take it he's the chief creditor?"

"Chong's my only creditor. You might even go so far as to call him my banker. There was a time when he'd honor any old *chit* I cared to write, but even he's getting tight."

Lavery pursed up his lips.

"Don't you keep a note of the amounts?"

"My dear feller! I'm not a clerk!"

"But this money can't all represent odd spots. It isn't credible."

Moffat screwed up his eyes and yawned.

"It doesn't," he admitted. "It stands for all manner of things. Some clever idiot once said I had a Rolls-Royce taste on a Ford income. It's the way I was brought up. How in the name of everything anybody expected a feller of my tastes to exist without creature comforts I don't know! Look at the hovel I'm supposed to be comfortable in! Look at the bugs! Look at the bathroom! Chong had no end of a job getting me the particular brand of soap I wanted!"

"But even soap——!"

"Soap, cigarettes, bath salts, all sorts of things. When he gave me the first account—I nearly dropped. His figures are so appalling I couldn't bother to tot it up, but I managed to make out the total after a bit. I offered to toss him double or quits—and, of course, he won. Every month now I hand him my salary just as I receive it—and play him for the balance on the same terms. I'm a deuce of a gambler, I admit, but I think it jolly sportive of old Chong. He hasn't the remotest notion when he'll see a tithe of his money—and yet he cheerfully consents to risk the lot on one little turn of the brass box."

"The brass box?"

Moffat stared at the other in sheer amazement.

"D'you mean to tell me you don't know the brass box? It's the hub of the Chinese universe! There's the lid which is pretty solid and fits over a smaller piece in which a single square hole is cut. Into this inner portion a wooden cube is fitted, marked red and black on each of its four surfaces. The game is played on a board divided into four sections. The banker takes the cube, shows it, drops it into the inner bit and slides the cover over. He places it in the center of the board, twiddles it round—and you back the section opposite which you fancy the red will show up."

"A sort of roulette."

"More or less. Interesting, isn't it? The absurd box and all that depends on it fascinates me. There's my life, Lavery; there the groove I've hacked out for myself. Show me a way out and I'll take it."

The other did not answer for a moment. Presently he tapped a cigarette thoughtfully on his thumb-nail and lit it with unnecessary care.

"You spoke of your upbringing. Haven't you a wealthy relative knocking about somewhere who'd help you out?"

"Afraid not. I'm just keeping my eye on the little brass box. My luck's been out for centuries; but one day it'll be in——"

"And you'll begin all over again."

"Not if I know it. You won't believe me, I know, but I can get up from the table with the next man. I know when to leave off."

"Why not now?"

"What's the good? There'll always be the Chinaman to settle with. I can't leave the island—go anywhere until I've squared Sui-Chong. He's got me body and soul. There's nothing else for it, I must just push along as I'm doing."

Lavery glanced at his watch.

"You can't," he declared. "You can't just push along with Glenister. He's a manager in a thousand, but he has the interests of the firm to consider. He can't afford to go on tolerating your half-hearted efforts. One of these days he'll come to the end of his patience—and you'll be fired."

Moffat's face fell.

"Hm! I hadn't counted on that. It'd be awkward, wouldn't it?"

Darkness fell. Two glowing cigarette ends hovered in close proximity for still a few minutes.

"Look here, get the exact amount from Chong and we'll foregather at my place one evening and try and see daylight."

The third assistant laughed again.

"Ye gods! what an optimist! Lavery, old bean, I couldn't pay Chong a halfpenny in the pound! Good night!"

He strode off to where a single paper lantern swung in an open doorway and Lavery watched him with something like a lump in his throat. As he stood there motionless, the tune that Moffat was whistling floating back to his ears, he saw the slim figure of a woman come within the range of the lantern-light.

"*Kuala!*" he murmured, held rooted to the spot by all the glory of her Oriental loveliness. But a few months ago, it seemed, this amazing result of a fusion of Chinese and Dusun blood had been a gawky, uninteresting child shrieking and playing in the dust. Tonight she reposed in the rough doorway —a picture worthy of a better frame. She reminded Lavery of a figure from a Chinese vase, a vision of ivory whiteness clad in a long coat of dark blue silk embroidered with silver flowers and butterflies, of glossy black hair drawn back from her forehead and so arranged at either side of her face that not a single hair seemed out of place, of long, thin eyebrows that might have been painted there, of lips like garnets—— Upon her left wrist she wore a bracelet of jade. She reminded him of a gorgeous dragonfly that had taken up its abode in the wilderness.

As the third assistant swung towards her with easy stride, she raised both her white arms in welcome.

"*Tabi, Tuan!*" She employed the Malay greeting.

"Evening, Kuala!" He halted before her, hat in hand, the cane with the frayed end dangling from his arm. "I like that frock—or whatever it is; it suits you. Sui-Chong in?"

She stepped back to let him pass and presently Lavery found himself gazing at an open doorway and the paper lantern that hung over it. A little farther away the long huts where the coolies lived throbbed with raucous merriment and guttural chattering. On either side a man-made forest of rubber-trees stretched to infinity; above him the great stars twinkled like jewels against an ebony background. A multitude of insects lifted their shrill voices in unison.

But the first assistant was aware of nothing but that illuminated entranceway and all that seemed to be associated with it. Bernard Moffat and his debts, Sui-Chong and the brass box—and Kuala! The whole thing puzzled him and the more he thought about it the more perplexing it became. Was Sui-Chong the affable, harmless shopkeeper he appeared, imbued with the instinct to gamble, an instinct that every Oriental inherits from birth? Or was he profiting by the frailties of the Englishman to get him into his power?—and, if so, to what end? Lastly—and perhaps more important still—what was Kuala's part in all this? Kuala, Sui-Chong and young Moffat. It was a strange triangle in all conscience and it gave Lavery food for reflection, as he made his way over dark, tree-clad slopes to his bungalow and dinner.

As for Bernard Moffat—he had got himself into that state that he rarely dined at all. Moffat was wiry; but for a constitution of iron he would have gone under long ago. Nevertheless, there is a time-limit even to the endurance of iron and the pace couldn't last.

He passed through the faded silk curtains and found the shopkeeper making marks with a brush and Chinese ink on an enormous sheet of paper. He was a cadaverous looking mortal of great height, with yellow cheeks fallen in under over-prominent cheek-bones. The look that he cast upon Moffat through a pair of horn-rimmed spectacles was expressive of neither pleasure nor annoyance at the interruption.

"Hullo, Chong!"

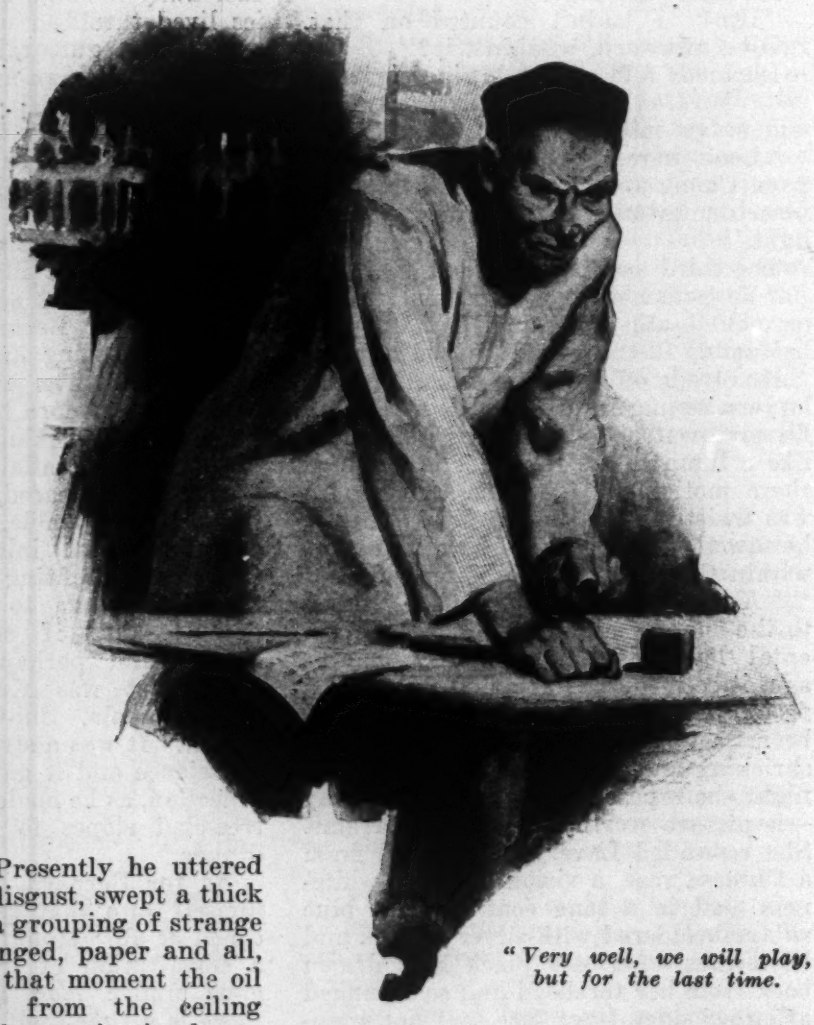
The Oriental inclined his head.

"Good evening, Mr. Moffat."

The assistant disposed himself on a tea chest and resting his stick with his topee set on the top in a corner, carefully adjusted his trousers. From an inner pocket he drew a wad of paper money and pushed it across the table.

"There you are, you old octopus. Interest on the overdraft, shall we call it? You've every bean I possess in the world—and first call on everything I'm likely to lay my hands on hereafter. Kuala, there's a case of beer at your elbow!"

The girl must have been dreaming, for she leaned easily against the wooden partition, her lips slightly parted, her mother's dark eyes fixed on Moffat. Sui-Chong's head was down again over his figures. Presently he uttered an exclamation of disgust, swept a thick black line through a grouping of strange characters and plunged, paper and all, into the shop. At that moment the oil lamp that swung from the ceiling smoked. They both saw it simultaneously and both sought to adjust it. There was a mild collision, a queer little laughing cry from Kuala, a murmured apology—— In the restricted space between the table and the wall there was no room for either to retreat. The girl, moving sideways, tripped over the chest upon which the Englishman had been sitting. He caught her by both arms to save her from falling—and the touch of her warm flesh to his long fingers set in motion an inner mechanism of the existence of which he was unaware. Kuala had regained her balance, his end was accomplished, but for some reason or other he was incapable of loosening his hold. It reminded him afterwards of an electric shocking-coil with which he had experimented as a boy. Formerly she had appealed to him as part and parcel of the *maison* Chong, a ministering angel who brought him beer when he was thirsty and in a vague sort of way he was glad to see her there; it was his invariable habit when he tried his fortune with that fascinating brass box to appeal to her to give it a final turn. She had never brought him luck, but in some things Moffat had grown to be a



"Very well, we will play, but for the last time.

"The last time?" Moffat echoed blankly.

creature of habit. To-night—in blissful proximity that a lover might have envied, with Sui-Chong grunting and wheezing over his stocktaking—something had occurred that set him shivering involuntarily like a man with the ague. He wanted to go on holding Kuala; the fragrance of the subtle perfume she affected intoxicated him, rendered him deaf to the voice of reason. In the depths of those lustrous eyes that gazed up at him shyly he could read—in the light of his newborn understanding—many things. She was beautiful, wondrous not with the

placid beauty of the western rose, but with the glory of the lotus. She did not attempt to free herself, to complain that his fingers were bruising her flesh. In every flutter of her lashes, every feature, he caught the message that scorned articulate expression—that she was his to possess if he chose. A sudden cough from the elderly Chinamon without reminded him that moments were precious. His hands slipped from her arms, a mist swam before his eyes and he woke to find he was kissing her lips, her hair, the tiny triangle of throat that showed between the two ends of the encircling collar of her robe.

"Kuala! You're wonderful!"

She lay like a timid, fluttering bird in his arms, pressing her cheek against his own so that he could not see her face. Presently she had slipped from his embrace and was leaning against the partition just as she had been when her father had gone out.

Sui-Chong, still flourishing his brush and scroll, came back through the curtains and found his stool. He appeared lost in the realm of figures. He glanced up at the Englishman, raised his brows, blinked as any western grocer might have blinked, then, reaching behind him, obtained a bottle which he dumped on the table in front of Moffat. The bottle was followed by a glass of appalling thickness, a tin of cigarettes and, produced from his clothing as a conjuror might bring to light a rabbit, two and a half cubic inches of solid brass.

"You wish to play?"

The third assistant started from his reverie and reached for the bottle.

"Of course. Why not?"

Sui-Chong drummed with his long finger-nails on the surface of the table, his face puckered up into a myriad of wrinkles.

"It is a big sum, Mr. Moffat."

The other drained his glass.

"What's in the wind, Chong? You surely don't contemplate depriving me of the one little pleasure I have in life?"

The Chinaman picked up the brass box and set it in the middle of a crudely painted square divided into four triangular sections. He stared for some moments at the surface of woodwork, then glanced sharply up at Moffat.

"Very well, we will play, but for the last time."

The assistant met his gaze.

"The last time?" he echoed blankly.

Sui-Chong's eyes had all but disappeared. The expression that played on his thin lips was grim and cruel. Slowly it began to dawn upon Moffat that the climax had come; the bank of which he had boasted was refusing payment.

"I have waited patiently, Mr. Moffat, but my patience is at an end. Before the end of another month comes round—I must be paid in full. Are you listening? It is possible that I may be going away from Lembanis. Another manager will come—and I am accustomed to settle all my affairs before I go. I give you one chance. It will be easier perhaps to find what you owe me now—than to pay me double that amount. Would you like to know the figure—so that you can withdraw?"

Moffat's hands had clasped themselves in front of him on the table. He was up against it with a vengeance, yet while he grouped in the dim recesses of his brain for enlightenment, a mocking, dare-devil smile played on his lips. He had followed his mad career to its uttermost limit, and his follies had landed him in a *cul-de-sac* above whose towering walls he could not even see the faintest riband of blue heavens. He helped himself to one of Sui-Chong's cigarettes, tapped it thoughtfully on his thumb-nail and felt in his pocket for matches. At that instant something made him look at Kuala. He could have sworn that she shook her head. The movement was necessarily a slight one, for the room was small and Chong had a trick of seeing things reflected in the corners of his glasses. And then, as the flame of the match leapt up before his eyes, Moffat understood. She was warning him not to play. Kuala was a woman who had seen little of the world beyond the four walls of her father's shop. Her mind was incapable of calculating beyond mere dollars and cents. She was frightened at the amount involved. The smile on the third assistant's handsome face broadened. Poor little Kuala! She was dreaming impossible dreams, hoping impossible hopes. She little guessed that the white man who had held her in his arms had as much chance of settling the one amount as the other.

"So—you want your money, Chong! To the devil with you! Twiddle the box and let's see her spin." He set the empty bottle in the section of the board nearest him—and balanced the glass on top. "There we are! Now let's see the magic cube. She loves me—she loves me not!—she loves——Chong, you dirty hound, you've swung it on me again!"

Opposite the bottle the black half of the wooden cube lay exposed to view.

Moffat rose mechanically, groped behind him for his stick with its frayed end and rammed the topee firmly on his head. The room seemed to be spinning round him, the fetid atmosphere choked him; he wanted air. He pulled himself together with an effort.

"Cheerio, Chong! You've the luck of the devil. You ought to try a trip to Monte Carlo; it'd pay you!" He raised his hat to Kuala—for all the world as if nothing unusual had occurred between them—and made for the door. At the entrance he turned, his fingers just touching the curtains of faded silk.

"By the bye, you didn't tell me the amount."

Sui-Chong cleared his throat.

"Sixteen thousand dollars and forty cents."

If Lavery could have seen Moffat at that moment, he would have realized what a consummate actor he could be when he chose.

"Is that all?"

The Oriental came suddenly erect.

"Sixteen thousand dollars is a lot of money."

"I'm trying to think," returned Moffat, "why on earth you cling so lovingly to those odd cents! There are some gentlemen with large noses in Jermyn Street who'd love to shake you by the hand. Bye-bye!"

He had passed through into the shop, letting the curtains swing behind him, before Sui-Chong could question him as to his meaning. Kuala, watching her father, saw that he was troubled. There had been other white men who had owed him money, but none of them had behaved as Moffat had done. They had stormed, raved, queried the figures, protested; not strolled away with a smile on the lips and a joke. Chong took up his brush, dipped it in the saucer-like receptacle that held the ink, placed it down again and went back to the store. It occurred to the girl that from a second view of the back of the departing Englishman he hoped to glean enlightenment.

The curtains were still rustling to and fro when Kuala stole softly from her corner, snatched something from the table and crept out by a back way. She had been silent while Moffat and Sui-Chong had been talking, but she had missed nothing of the scene and its significance. From the moment the Englishman had kissed her her mind had been in a state of insurrection. Month after month she had leaned against that same partition, watching the shearing of her father's latest victim, assisting even in the process. Moffat had scarcely noticed her, treated her as a child, been criminally blind to her charms. Unlike others she had known, he had passed her by for a bottle of *p'rempuan* lager. Every feminine instinct outraged, she had exulted in his downfall. Now everything was changed and with his sudden recognition of her beauty, her desirability, she had suffered a revulsion of feeling that actually hurt. Her mind was made up; unashamed, she had taken sides with the enemy and wanted with all her heart and soul to tell him so. There was another thing, moreover, that troubled her. She who spoke the faltering English her father had taught her, who owed everything to instinct rather than education, knew that the air of nonchalance with which Moffat had received his ultimatum was assumed. There had been a glint in his eyes that had frightened her. For the briefest of seconds his hand had rested on his hip-pocket—and she was not altogether unaware for what purpose hip-pockets were usually made.

Through gaunt tree trunks a molten sea shimmering in the light of a tropic moon attracted Moffat's attention. He had eaten nothing since mid-day; more surprizing still, the load of alcoholic liquor he carried away with him in his inner man from Sui-Chong's store was the contents of a single bottle. And yet the third assistant of the Lembanis Estate was aware of neither the pangs of hunger or thirst. So much water seemed to have run under the bridge

since he first descended the slope to the estate shop that he had lost all account of time. His whole being was numbed —and his feet trod the track towards the ocean almost without his knowing it. Moth-like, he just drifted towards the brightest thing that offered, with a chorus of devils hammering and prodding at his brain, forever reminding him that he was up to his neck in the mire of irretrievable ruin, that his name was *mud*—and that the best thing for everybody concerned—except perhaps Sui-Chong—was that he should speedily put an end to his existence.

He must have left the lines of rustling rubber, clambered through the wire fence, crossed the railway lines, groped his way through the belt of coco-palms, but of this he remembered nothing. He found himself sitting on a grassbank a score of paces from the water's edge, with his cane on the crook of his arm and a freshly-lit cigarette between his lips. Chance had led him to a tiny natural harbor, shaped like a horse-shoe, where moon-kissed wavelets lapped gently over a sandy shore. The shoe itself was a black shadow tipped with weird papery fingers that shivered in the breeze from the ocean. In the eerie stillness of his newly-discovered retreat his sense stole softly back to him. Presently he felt for his automatic, surveyed it curiously, then dropped it on his knees. There was a half-wistful smile hovering on his lips as he gazed around him. The feathery branches of the palms admonished him, the stars blinked friendlily but offered no solution to his troubles, the waters whispered vaguely of the infinite. He removed his helmet, letting it fall unheeded to the ground. He stared for a moment at the ebony vault above, then picked the pistol deliberately from his lap and pushed the catch over from safety. It was a thousand pities—but nevertheless inevitable. *Hara-kiri* the Japanese called it—a less romantic western civilization, suicide while temporarily insane! The thought that was uppermost in his mind as he pressed the cold steel barrel against his temple was that it was rough luck on Sui-Chong.

And then—even as his forefinger touched the trigger—a shrill cry broke upon his ears. The weapon dropped a couple of inches, then fell to his side. The slim form of a woman came hurrying, stumbling across the open space, making straight for him. Still uncertain, he swayed to his feet and shaded his eyes.

An expression of annoyance found easy utterance, not because it was Kuala who threw herself sobbing at his feet, but because her coming reminded him of something for which he was infinitely sorry.

He had a sort of remote idea that somewhere in existence there were books on etiquette; he wondered how their compilers would classify a man who kissed a beautiful woman—then coolly strolled to the shore and shot himself? Looked at from every point of view it could scarcely be interpreted as a compliment!

Her warm fingers clutched at his sleeve, traveled swiftly down his arm until they closed upon the pistol he still carried. She gained possession of the thing without effort and, with a practised ease that surprized him, released the clip, scattering the tiny cartridges broadcast. A moment later she had crept into his arms.

In this sea-girt garden of impossible hopes they flaunted the grim barriers of East and West, a fickle moon lending reality to their dreams. Moffat, lone, lorn, on the brink of disaster; Kuala, hysterical, palpitating, babbling incoherent phrases made up of a confusion of tongues. They had drawn back into the cover of the trees, for fear Sui-Chong had followed, and the presence of the girl at his side made the planter forget even the motive that had brought him there.

Suddenly Kuala sat up.

"*Tuan* Moffat, why did you seek to destroy yourself?"

The man started. He clasped his hands over his shins and smiled up at her.

"Because, little Kuala, I owe your father more money than I can ever hope to repay."

There was silence between them for a long while after that. Presently he felt a gentle tug at his sleeve and the brass box was thrust into his hand.

"I love you, *Tuan* Moffat," she said simply, "but you are a fool nevertheless!"

The third assistant's forehead

wrinkled. Lavery had told him much the same thing six hours ago.

"Why do you say that?"

"Because you trusted my father."

Not having the remotest notion in what direction her conversation was leading, Moffet grinned.

"On the contrary," he murmured, "Sui-Chong trusted me. If you had rolled up five minutes later——"

A finger with an exquisitely shaped nail was pressed to his lips.

"You believe that you owe my father sixteen thousand dollars——"

"— and forty cents!"

She gave a little impatient shrug of her shoulders.

"I tell you, although I am his daughter, that you owe him nothing."

"Nothing?"

"Absolutely nothing. You have paid him money every month that would suffice for everything with which he ever supplied you from the store. For the rest—he has cheated you."

Dimly convinced that the happenings of the evening had turned her brain, Moffat brought his arms and legs round together, so that he faced Kuala.

"My dear little Kuala, you're a wonderful little lady—and all that; but when you begin laying down the law to a hardened old sinner like myself ——! It's impossible, old dear. You can't cheat with the brass box. Sui-Chong didn't determine the final position of the thing. It was up to me to give a final turn for luck, if I chose."

"But you never did. You were too lazy, too trusting, too foolish."

The third assistant waggled an accusing finger.

"I left it to you. You turned for me —always."

She looked away from him.

"And I—was my father's daughter!"

His fingers were moving nervously over the smooth sides of the box. Suddenly he uttered a sharp exclamation—as if something had pricked him; and with this chance discovery understanding came. A look of mingled surprize and amusement crept into his face. It was typical of Moffat that the knowledge of Chong's perfidy caused him no annoyance. In a modified degree his innate sportive instinct paid tribute to the other's superior cunning.

"The—old—devil! Kuala! From the mouths of babes and sucklings! Oh, my giddy aunt!"

He went off into a peal of merriment —and the girl in the coat embroidered with silver flowers and butterflies surveyed him with amazement. His gaze lit suddenly upon eight little cartridges, symmetrical jet shadows against a yellow background. The significance of their presence there checked his mirth. Sui-Chong was a bit of a swine after all. He might have guessed—— Moffat rose deliberately and, collecting them with care, wiped off the grit on his tunic and replaced them in the clip. He drew himself erect to find the girl at his side.

"*Tuan* Moffat, you will promise me——"

"Oh, I'm not going to shoot myself, if that's what you're getting at." He drew in a deep breath, inhaling the clean salt air that was borne on the wings of the wind. "Kuala, life's a weird thing when you look at it. A short while ago I had convinced myself that everything was at an end. I thought the game was played out. Good Lord, what an abject ass I was! It's only just begun; the course is as long as from here to the horizon which you can't see because the moon's so deuced dazzling. No, I shan't try a hand at shooting myself again. I'm going to play the game by you, little Kuala—and that's going to be none too easy; I'm going to dig myself out of this horrible trench I've dropped into." He broke off suddenly and caught her hands. "If I make many more rash promises my present mood of enthusiasm'll go to my head. I shall wake up in the morning as I used to after a bout of your father's rotten beer—and empty the water jug before I can stop the pink spots jumping in front of my eyes!" He drew her to him until their faces almost touched and his face twitched queerly. "You saved my life, you little yellow enchantress; do you realise that? I was halfway over the border-line to eternity when you pulled me back. By all the laws of humanity, we haven't an earthly right to one another, there's an impassable barrier stretching between us and anything we may do together can only end in diaster. And yet, Kuala, there are ex-

ceptions to every rule. Something tells me I'm right—dead right. I must be right," he cried fiercely to the stars. "If I had a soul before it can't have been worth much—and if I possess one now it belongs to the only human who sacrified everything for me, stretched out a hand when I was down and out!"

Startled at his own sudden eloquence, conscious of the lateness of the hour and the risks Kuala ran in prolonging her absence from home, he crushed her to him, imprinting hot kisses on her lips, her cheeks, her fluttering eye-lids.

Lavery pushed the cablegram back across the table to Glenister.

"It's a chance in a hundred," said the manager, "and yours if you care to take it."

Lavery pursed up his lips.

"I don't," he returned firmly. "I'm stopping with you. A managership's a nice thing, but I fancy I'll bide my time until something falls vacant on the island. I've a lot of friends here."

Glenister stroked his moustache thoughtfully. He was shorter in stature than either the first assistant or Moffat, with a neck like a bull and gray eyes that saw further than those of most men.

"I suppose I must take that as final."

"Absolutely. What about Leigh?"

"Leigh's out of the question. He's not due back from leave for a fortnight—and the Selangor people are evidently in a hurry. Besides, I can't quite picture Leigh managing anything. He wants somebody over him to prod him every now and then. To tell you the truth, I'm more than half inclined to pass him over for Moffat."

"Moffat!"

"Yes. He's steadied down amazingly of late. I've had my eye on him for some time—and a month ago I was on the point of sacking him. He was well on the down-grade—too many odd drinks and all that sort of thing; but he managed somehow to pull himself up. I wouldn't give a thing for your average reformed drunkard; but Moffat's a cut above the average. He's got initiative and he's through."

"He's all that," conceded the first assistant, not unmindful of his junior's recent capacity for lager—and his debts.

The manager leaned back.

"So you don't agree with me?"

"Not altogether."

"What's the trouble? D'you think he'll have a lapse?"

"It's possible, of course; but unlikely. Moffat's an enigma. I had a heart to heart talk with him barely a month back and, although I'm not out to claim any credit for what afterwards transpired, I believe you can date the change in him from then. He hasn't been near Sui-Chong's show, he's been persistently present at five-thirty roll call and he's got his section into apple-pie order."

"And yet you object to my offering him the post?"

"I don't say that. I'm only preventing you from wasting your time. I have every reason to believe that you'll meet with a point-blank refusal."

Glenister's bushy brows lifted.

"I sincerely hope you're wrong. After his recent exploits, a change of surroundings would do him a world of good. Looking at it from my own point of view, to decline to nominate any one is tantamount to admitting weakness. It'll be up to them to argue that either I'm incapable of training fellers to qualify for decent posts—or I'm harboring a pack of inefficient assistants at the firm's expense. Look here, Lavery, drop in at Moffat's bungalow this evening. Put the thing fairly and squarely before him and let me know what he says. To-morrow's the last of the month and I shall be busy in the office all day. You'll have no difficulty in finding me. Impress upon him that time is an important factor. At all costs he must be ready to sail by the next boat.

Lavery rose.

"Very good. I'll ride over with his reply at breakfast time."

He was a good thirty yards from the house when Glenister called him back.

"It's quite on the cards Moffat may be in need of money. Don't let that stand in his way. I'll advance him some if he's short."

On his way to the spot where his men were working, the first assistant caught himself smiling. He had not the slightest doubt in his mind about the financial situation at Moffat's!

He found the third assistant that evening engaged in constructing a plan

of his area, shading in the portions of it with colored crayons. He looked up as the other mounted the steps and pushed a chair forward with his foot.

"Hullo, Lavery! Come in for a man's drink?"

"No," said the other, not in the least offended at having his own words thrown back at him. "I've come to offer you a managership in Selangor."

"Come out of that tall grass!" advised Moffat.

The first assistant sat down heavily.

"I'm perfectly serious."

"Of course you are! Come on, Lavery. Let's have the answer. I'll buy it!"

"You don't deserve it in the least," growled his senior, "but, for some reason or another, Glenister wants you to take it."

"If it's such a fine proposition—why don't *you*?"

"Because I'm a sentimental idiot, I suppose. I'm sticking to Borneo and the manager. Leigh's out of the question." He folded his hands in front of him and stared hard at Moffat. "You've pulled up mighty well, laddie, but a trifle too late. Remember what I told you about missing chances?"

"Too late?" queried Moffat innocently.

"Unless you've come into a fortune."

The third assistant held his head to one side. There was an odd twinkle in his eye and his lips moved one over the other as if he were endeavoring to suppress a smile.

"D'you want my answer now?"

"The chief wants to cable back tomorrow morning."

Moffat reached down his hat and the preposterous walking stick with the frayed end.

"The decanter's at your elbow, there's more soda knocking around if you want it and a pack of patience cards in the left-hand drawer of the table."

"Where are you going?"

"To Chong's!"

"Don't be a fool!"

"I'm not," said Moffat. "I'm a blinking 'ero! Don't get too bored with yourself. I shall be back within the hour."

"Look here, Moffat. It's not good enough. I don't mind waiting around if there's any good to be gained by doing so; but you know as well as I do you're broke to the wide." A sudden thought startled him. "You're surely not contemplating messing about with that brass box again?"

The third assistant was already at the foot of the steps.

"Ever tried your hand at thought-reading, Lavery? You'd make thousands at it!"

Sui-Chong was bending over an open chest when the curtains parted. He brought his head slowly round to see Bernard Moffat, urbane and smiling, on the threshold.

"Evening, Chong!"

If the Oriental had ever hoped to reduce the Englishman to such straits that he was mobile as putty in his hands, he was doomed to disappointment. In the time that had elapsed between their last meeting and the eve of the day of settlement Moffat had lost no flesh.

"You can only have one reason for coming here," said Sui-Chong coldly. "Otherwise there is no welcome for you at my house."

"And no beer!" murmured Moffat.

"And no beer!" echoed the Chinaman, facing him squarely.

"It may interest you to know that I don't want any. It was poor stuff at the best of times and I've always had my suspicions you watered it down."

He hung his cane on the edge of a shelf that supported a miscellaneous array of tinned fruits and sat down without troubling to remove his hat. The Oriental uttered a queer clicking noise and bent over the chest again as if oblivious of the other's presence.

Moffat cleared his throat.

"Sit down, Mr. Chong!" he thundered suddenly, fixing his eyes on the trader as he span round. "Sit down over there—and be civil."

There was a glint in Moffat's eye that would not be denied. The man in the horn spectacles dumped down on his stool—and Kuala—pale and wondering—appeared at the doorway behind him.

"Before I pay you, Mr. Chong, I wish you to assure me on your word of honor that the figures you gave me were correct."

Sui-Chong blinked at the lamp.

"Absolutely."

"And that everything connected with my debts to you was fair and above board."

"Perfectly."

The third assistant's hand went to an inner pocket of his coat that bulged with nothing more than an empty pocket-book and a few odd letters. His fingers closed on its contents, hesitated—and the hand came back to the table empty.

"I have it on very good authority that your phenomenal luck at our amusing little game was open to suspicion. Are you listening, Chong? They tell me the box was a faked one!"

Sui-Chong scrambled to his feet, white to the lips, trembling with well-assumed fury.

"Be very careful, Mr. Moffat!"

"It seems that one has to be!"

"Are you suggesting——?"

The third assistant, serenely unruffled, stuck both hands in his trouser pockets.

"As there is such a large sum of money involved and as there appears to be a doubt in the matter, I'm counting on you to reconsider your decision of a month ago. We will play once more on the same terms—and using the same brass box."

The Oriental had regained something of his habitual calm and he shook his head from side to side, his features screwed up into a regretful smile.

"Your friends were misinformed, Mr. Moffat. The brass box was like any other brass box. If I had it here, I would willingly prove it to you; but unfortunately it is lost."

Moffat's left hand rose above the surface of the table, its fingers encircling something compact and heavy. The sharp intake of breath that greeted the sudden appearance of the missing box drew Sui-Chong's head smartly round to where Kuala was standing.

"You will not deny that this is yours. Every workman, they tell me, knows his own tool by certain peculiarities of shape, of construction, of color. I place it there—in the center of the board. I lift the lid; the cube is in its place. I close it again—and we are ready. Will you oblige me by spinning it, Mr. Chong?"

The Chinaman sat with his hands on his knees, glaring from Moffat to the box and from the box to Kuala.

"Are you afraid?" demanded the planter softly—and Sui-Chong, starting as if he had been struck, spun the thing between his finger and thumb.

"Now, if you will allow me, one slight turn for luck!"

Without attempting to conceal his object, Moffat ran his forefinger over the surface until it rested upon the sharp point that indicated the position of the red half of the cube, the point that had pricked on the sea-shore.

"That is my section," he added—and withdrew the lid.

"Your luck is out, it appears!"

He grinned up at the barrel of an automatic. Before he could recover from the surprize of finding so modern a weapon between Sui-Chong's fingers, he realized that the Oriental had pulled the trigger twice, without effect.

"What! Still unlucky!"

The mocking smile that played on the Englishman's lips heaped coals of fire on the store-keeper's fury. He lowered the weapon and, clawing with frenzied haste at the butt, revealed an empty cartridge-clip. For a moment of time he stood immobile, his face twitching horribly; then flung the pistol full at Moffat's head and sprang with a snarl towards his daughter. Moffat saw her make for the opening, her father close at her heels. Sui-Chong's right hand come out of the folds of his long black coat, swung suddenly aloft, and Moffat caught the glint of naked steel.

In the next instant the faded silk curtain behind him was pushed aside and a broad hand, taking him in the small of the back, pushed him to the wall.

"Drop that, Chong," rapped out the familiar voice of Lavery.

And then the gods were kind to Kuala. The knife was already on its downward path when the girl tripped and fell. Sui-Chong over-reached his mark and the shot that followed swiftly upon Lavery's warning served only to pitch the Chinaman headlong over the quivering body of his daughter.

It was Moffat who pulled her from under, and his arms shut out the sight.

The silk curtain dropped behind Lavery's retreating back.

"Not too late, after all," he murmured, as he came out into the night.

King George and Queen Mary in their "working clothes."

KINGS, PRINCES AND GOVERNORS

By ERNEST BROOKS

CHAPTER IX

SINCE my duties as official photographer took me so frequently into Buckingham Palace, to Windsor and to Balmoral, I have learned, perhaps, more than any outsider about the routine and home life of the King and Queen.

No matter how late their duties keep them up at night, both Their Majesties rise as early as usual. Nothing is allowed to disturb the routine. King George, unlike the late monarch, King Edward, is an early riser. In the spring and summer it is no uncommon thing for him to enjoy a ride in the park, with others of his family, before breakfast, which is served punctually at nine o'clock.

Light meals are the rule rather than the exception at Buckingham Palace. The King, while not averse to a particular blend of tea, frequently has cocoa, of which he is very fond. Fish and fruit generally provide this meal, after which His Majesty retires to his writing-room to deal with correspondence, of which there is daily a great accumulation.

When the King reaches this opening stage of his day's duties, he finds that his correspondence has been arranged for him by his secretaries, whose duty it is to deposit the different letters into three specially marked trays. One tray is marked "Home Official," with a companion "Foreign Official," but by far the majority of the letters are to be found in the tray marked "General."

There is a good hour's work ahead of the King then, sometimes more, because he generally dictates replies to his private secretary immediately on receipt of the correspondence.

Only letters coming under the three headings already mentioned are dealt

with in the morning. For his private correspondence King George generally makes use of a leisure hour after lunch, or after dinner, when, over a cigarette in his personal apartments, he will reply to the letters of his friends.

King George does not make great use of the telephone, although one stands on a table in his workroom. Only a certain number of people may get into touch with His Majesty by phone. A certain password must be repeated to the Buckingham Palace exchange before an inquirer may speak with the King.

Like the code word to the combination of a safe, this password is changed at intervals. Although it is a closely-guarded secret, on one occasion, at least, the password leaked out. That was during those tempestuous days of the suffragettes. They were known to have supporters among some of the titled women of the country, and it is probable that, from this source, one suffragette gained knowledge of the word which enabled her to get through to the King and ask him what was then the eternal question, "Should women have the vote?"

Naturally King George was annoyed at his privacy being disturbed in this fashion, and the password was immediately altered and knowledge of it strictly limited to the Royal Family and Lord Stamfordham.

The King generally has a number of callers in the mornings, during the time that the court is at residence at the Palace. Members of the Cabinet and the Premier are regular visitants; nevertheless, His Majesty usually finds time for a game of tennis or of squash rackets in the conservatory.

Lunch at 1.15 P. M. (Palace Time) is nowadays a much quieter meal than it used to be. Guests are not so often at the table, as was customary in King Edward's reign. Here again, as at the dinner served at eight o'clock, King George partakes of a light meal. He likes something daintily served, not a stupendous array of dishes.

It is a common supposition that His Majesty drinks whisky. Such, indeed, is not the case. I should call cocoa his favorite drink, but he also drinks ale. Cigars and pipes have really little fascination for him, and I should say that the King is strongest in his allegiance to cigarettes, of which he has a brand of his own.

After a short sojourn in the drawing-room after dinner, His Majesty may retire to his writing-room, again to deal with further correspondence before reaching his bedroom about eleven o'clock. Unless there are functions or other important matters that necessitate his attendance or attention, King George is generally in bed before midnight.

At Buckingham Palace King George has three valets who attend to his personal appearance and the care of his clothes. It is the head valet's duty to see that His Majesty's many suits and special uniforms, suitable for different functions, are attended to.

King George is remarkably economical in footwear. Many a country gentleman and man-about-town has double, or treble, the number of boots and shoes the King possesses. That is because His Majesty does not care for new footwear, even when it is specially made for him. There are certain well-worn shoes that he would not part with in favor of new pairs, so comfortable are they.

I have seen His Majesty wearing a pair of shoes, one of which bore a patch! Obviously they were a pair of "old friends" that he had no desire to part with.

King George commands the utmost respect from the entire household staff. Yet there is one man in the Palace who dares to be frank with, and even contradicts His Majesty on occasion. This is the Sergeant Footman.

This functionary informed the King one day that it was now time for lunch, and the following amusing dialogue ensued:

"It is now time for lunch, Your Majesties."

"It is not time for lunch yet," replied the King.

"It is a quarter past one o'clock, Your Majesty."

"It is *not!*"

Thereupon the Queen remarked, as the Sergeant Footman withdrew, "You know, George, that he is quite right."

"It doesn't matter a damn. He has no right to answer me back."

It is when the King goes north to

It requires three servants to load the King's shotgun when he goes shooting.

lovely Balmoral that he enjoys the most diversified sport of the year's round. With trout and salmon-fishing, grouse shooting or deer stalking, His Majesty need never lack diversion, so far as outdoor recreation is concerned.

No more invigorating retreat could be imagined than Balmoral, with its pine-scented air and its tonic atmosphere. In the Stewart tartan, the King moves among the clansmen, who look upon him as their Chief. Many of the older men remember him in his youth, and, I believe, there is still one hoary-headed and shaggy-bearded old Highlander who can recall the time when the King was "blooded."

This is one of the ceremonies peculiar to Balmoral. All the male members of the Royal family who have been there have undergone it at some time or other.

The ghillies perform the duty with all seriousness. The blood of a newly-killed stag is used, and one of the highland retainers dips his fingers into this, and makes a small mark, in the shape of a cross, on the brow of the person who is thus "blooded."

It is a custom dating far back and now carries with it a fellow ceremony, that of presenting a bottle of whisky to the ghillies by the individual "blooded."

Balmoral, to an even greater extent than Windsor, wipes out the formalities that are observed at Buckingham Palace. The old baronial castle becomes the home of a Highland chieftain, rather than that of a King. This im-

Princess Mary learning to drive at Balmoral.

pression is heightened by the appearance of the interior of the Castle, along every corridor of which are stags' heads and other trophies of the chase.

Tartan curtains and tartan upholstery add to the effect, as also do the magnificent paintings of typical Scottish scenes that grace many of the walls.

The King lives a hardy life among the purple heather when he goes north. One day may see him flicking his fly across the waters of the "Silvery Dee," and the next he may be stalking a fine antlered stag by dark Lochnagar, or engaging in a deer drive in the forest of Ballochbuie. The Dee is one of the finest salmon rivers in Scotland, and many a "bonny" fish has His Majesty hooked from its sparkling waters. Loch Muick trout are delectable, and many is the time the King has caught his own breakfast.

When Queen Victoria resided at Balmoral, her private retainer, John Brown, introduced the Scottish way of cooking trout into the menu, and the same style is still favored. The fish is fried in a coating of rough oatmeal, much in the same way as the more humble herring is treated by the Scots fisher-folk, and it makes an appetizing breakfast fish, of which the King is very fond.

Church-going on Sunday is strictly observed. To the little kirk at Crathie, where the Parish minister holds forth to an earnest congregation of crofters, shepherds, and workers on the Royal estate, the King walks in his kilt. His sons, should any of them be residing there at the time, accompany him, also wearing the kilt.

In the rear follows the Queen and other guests, and friends who are attending the service. On the way salutations are given and taken by the

crofters, and others bound for the house of worship. These plain souls make no ceremony of recognition, but respect is in their hand-to-cap salute or in their doffing of their Glengarry bonnets. King George returns these salutations gravely.

Queen Mary, at fifty-eight years of age, is as vigorous and energetic as most women many years her junior. Her alertness is mental as well as physical, and is due, no doubt, to the fact that Her Majesty passes no idle moment during the day. Even at times of leisure she is always occupied in some way or other, be it reading or sewing or engaging in conversation.

The Queen is a brilliant conversationalist, and enjoys nothing so much as a talk with some other interesting person, when a very wide range of subjects will be covered.

Her Majesty does not take part in outdoor sports; neither golf nor tennis have any appeal for her. She has her own quiet way of keeping fit, and the health of Britain's Queen is ample testimony to its efficacy. Fitted to the inside of a door, in one of the rooms of her private apartments, is a light set of "developers" or "exercisers," such as are to be seen in many gymnasiums.

Princess Mary wearing a dress which displeased the King. Before the photograph could be published, the King ordered the lines changed.

Every morning she enjoys the usual feminine luxury of a cup of tea and biscuit in bed. When her lady's maid enters, bearing a small pot of a special Indian blend of tea, Her Majesty knows that it is exactly 7.30 A. M. She is called at this hour each morning.

Queen Mary goes out of her way to make timid people feel completely at home. One country hostess, who was honored by a visit from Their Majesties, was rather flustered on the occasion, since the King and Queen were staying overnight.

During the day Queen Mary asked to be taken to the nursery to see the children. When this had been done she asked her hostess to come to her room and "see the portraits of *our* children." That little remark, so instinct with mother-love, did more than anything else to dispel the embarrassment of the lady.

The Groom of the Chambers has

already seen to it that Her Majesty's writing table is amply supplied with the necessary requisites, and when she enters the writing-room in the morning, to deal with her correspondence, everything is in apple-pie order.

A bulky mail bag is the Queen's, and invariably begging letters constitute a goodly portion of the whole. These are generally laid aside for investigation. In deserving cases Her Majesty is sympathetic, tangibly so.

Personal letters come direct to the Queen. Others are dealt with by her private secretary, Sir Edward Wallington. But Queen Mary goes over the general correspondence herself. Thorough in everything, she will not allow even the most capable secretary to deal with this correspondence, unless with her approval.

At this stage in the day's work the Queen invariably attends to the domestic affairs. On set days she makes a tour of the kitchens, sculleries and the bedrooms. In one room she may decide upon an alteration in the placing of the furniture, and when this is carried out to her satisfaction the room is rephotographed so that the maids may maintain the same arrangement.

Queen Mary is Britain's ablest housewife. She has always taken a full and complete interest in the management of the Royal households, whether at Buckingham Palace, Balmoral, Windsor or Sandringham, and almost immediately after coming to the throne began taking stock of the manner in which the household was run at Buckingham Palace. The result was that, within a very short time, Her Majesty had effected a considerable saving in expenses. A year after the Coronation, she had reduced the expenditure on household bills by £40 a week.

Before the War a fresh tablecloth was laid for each meal. Nowadays one tablecloth does a complete day. The table linen at Buckingham Palace is of the finest quality, and is valued at many thousands of pounds. Each article of linen, cloths, napkins, etc., is carefully checked by the two special maids whose duty it is to look after these things. The result is that not even a napkin is ever missing from the linen store.

The wedding breakfast of Queen Victoria was responsible for the "father" of all the table cloths in the Palace. It is of such dimensions that it covers a table at which no fewer than two hundred and fifty persons may sit down. As may be expected, that monster cloth is very seldom in use.

An interesting story is attached to one of the last occasions on which it was used. That was when a banquet was given in honor of the ex-Kaiser, at his last visit to England, prior to the outbreak of the War.

Although neither the King nor the Queen is superstitious, a belief was then current within the Palace—how it originated no one knows—that ill-luck or misfortune would follow in the wake of any who spilt wine on this cloth.

Up to the night of this banquet the snowy surface of the huge Victorian tablecloth had never been so marred. On this occasion, however, one of the German *aides* knocked over his glass of wine. When war broke out the incident was recalled by members of the Household.

Queen Mary makes periodical inspection of the kitchens in the Palace. They are beautifully kept, and are of white glazed Dutch tile, and thoroughly modern in every way. Before her marriage Princess Mary liked to accompany her mother on these visits, which were, in reality, her initiation into the work of superintending the management of a huge establishment.

Queen Mary exercises the same economy about her gowns and dresses as she does in household affairs. Each is made to last much longer than would a similar gown of a society lady. When they are finally discarded the Queen gives them away to the Ladies' Guild in South Kensington where they, with others, are distributed among ladies of reduced circumstances.

Without being fastidious Queen Mary is, nevertheless, very attentive to her dress and toilet. Her Majesty was always particular as to how she looked in any photographs I took. Indeed, she instructed me that I was on no account to photograph her at any function should she be holding up the train of her skirt with her hand.

It will surprize many people to read that Queen Mary herself sees to the appointment of maids at the palace. The housekeeper first interviews applicants

and submits recommendations to Sir Derek Keppel, Master of the Household. He, in turn, passes them on to the Queen.

The Queen is keenly interested in the comfort of the maids, and was, indeed, personally responsible for the comfortable quarters at Buckingham Palace, situated a little off from the main buildings. She considered the older quarters totally inadequate, and very soon after her arrival at the Palace, the Queen caused the present annex to be built.

Maids at the Palace are very well treated. There is no grumbling. They have more than one evening out each week, while they may sit in a well-appointed rest-room, furnished with the latest nawspapers, magazines, and a piano.

After lunch and also in the evening after the final meal, the Queen smokes a cigarette. Light Virginia tobacco is used in her favorite cigarettes, of which, however, she does not consume many in the course of a week. This cigarette after meals has been a practise of Her Majesty's for a few years now, and she makes use of a lovely cigarette holder, a birthday gift from the Prince of Wales.

When she has no immediate engagements the Queen rests. Even this does not mean that she is, to all intents and purposes, "out." If need be, the only servant so authorized may disturb her. This page wears black instead of the scarlet livery of the royal household.

Queen Mary's favorite picture of herself.

CHAPTER X

The national esteem, regard and admiration in which Edward, Prince of Wales, is held has, perhaps, never before, in any age, been so unanimously bestowed upon a Royal personage. Everywhere when Royalty is discussed is his name mentioned. And what a number of would-be match-makers there are throughout the Kingdom and our Dominions, people who would like to see the Prince "married and settled down!"

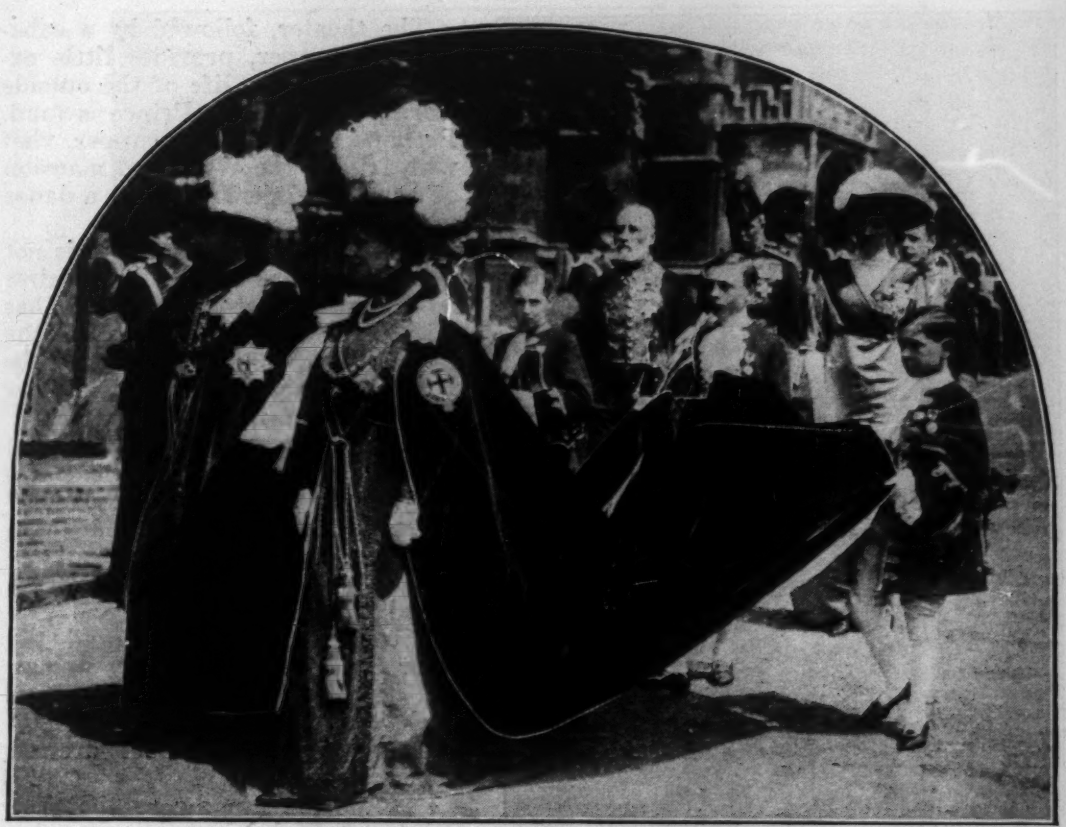
I know that no more absorbing topic exists, among women particularly, than that of "finding a wife" for the Prince. Rumor has provided him with a dozen brides-to-be at different times, and always new names are being mentioned. It is unusual to a degree that an Heir Apparent to the throne should remain a bachelor at the age the Prince has reached.

The King riding a pony on the moors.

No one believes for a moment that he will remain a bachelor, and speculation has always been rife regarding the direction in which his affection may turn. It has been affirmed in certain quarters that the Royal Marriages Act has proved the bar to the matrimonial venture the Prince would welcome. The clause in this Act which many people feel should now be altered limits the choice of a son in direct succession to ladies of Royal blood. In marrying a "commoner," no restricting clause of an ancient act affected the Duke of York, since he was outside the direct succession. Many intelligent people, not unconnected with the Court, feel strongly that British Princes should all be permitted to follow the unrestricted dictates of their hearts.

Undoubtedly the British people wish a very happy marriage for the Prince, preferably with a lady of the same race. That may be one reason why the list of rumored brides is almost entirely British in character. Among these whose names have been coupled with that of the Prince in a matrimonial sense are Lady Thynne, Lady Cavendish, daughter of the Duke of Devonshire, the daughter of Lord Curzon, and the eldest daughter of Lord and Lady Blythswood.

The names of American girls of good family and position have also been mentioned, but it would appear that these are even more mythical wives than the others. While it is true that the Prince's marriage to an American girl would have an extraordinary effect in cementing ties between this country and the United States, the fact remains that such a marriage would be the greatest surprize H. R. H. could provide to his own people, and particularly to the women of the Empire.



The King and Queen wearing the robes of the Order of the Gartar.

If the Prince marries before the Act is amended, where will he find a bride in the limited circle of foreign Royalties? Will it be a daughter of the Queen of Rumania? I have frequently debated the possibility, which entered my mind a year or two ago as the result of a certain conversation.

Queen Mary was congratulating me on the pictures I had taken of the Prince of Wales during his Canadian tour. I had made complete sets of the photographs into albums, and Their Majesties and the Prince himself had each received one.

"Has the Prince of Wales asked you for another album yet?" was the Queen's query on this occasion.

He hadn't and I said so.

"Well, I know that he wants one to send to the Queen of Rumania," was Queen Mary's reply.

The Prince's quarters in the Ambassador's Court of St. James's Palace, known as York House, are essentially those of a bachelor. Yet there was a time, before her marriage, when Princess Mary almost went to stay there to look after her two brothers. The Prince was very keen on this, since there is a great bond of affection between sister and brother, but the arrangement was never put into operation, although the Queen was inclined to favor it.

That is one reason why York House remains a purely bachelor household. The Prince's quarters are modestly and quietly furnished. He makes most use of the smoke-room which is his "den." Pipe-racks, cosy chairs, with a settee, a writing table, and another table in the center of the room, on which stands a gold cigar cabinet and cigarette box which once belonged to King Edward, are the noticeable furnishings of this room.

Here the Prince may spend an hour or so with any of his chosen friends, and chat over arrangements for the morrow.

As a rule he dines in his own apartments, and after dinner may stroll up to the Bath Club, if he does not wish

Princess Mary in her confirmation dress.

to take a taxi or order his own car. He is very informal, and would just as soon pick up a passing taxi as travel in his own limousine.

The theater, followed by a cabaret and supper, provides little excursions into the life of the outside world, of which the Prince is fond. Perhaps he may, after supper, visit with friends the West End mansion of some titled person, where a dance may be in progress.

He is always welcome, and is not merely tolerated because he requires no invitation to enter a house. That is one of the privileges of the Royal Princes. They may not be formally invited to another's house, but they can invite themselves!

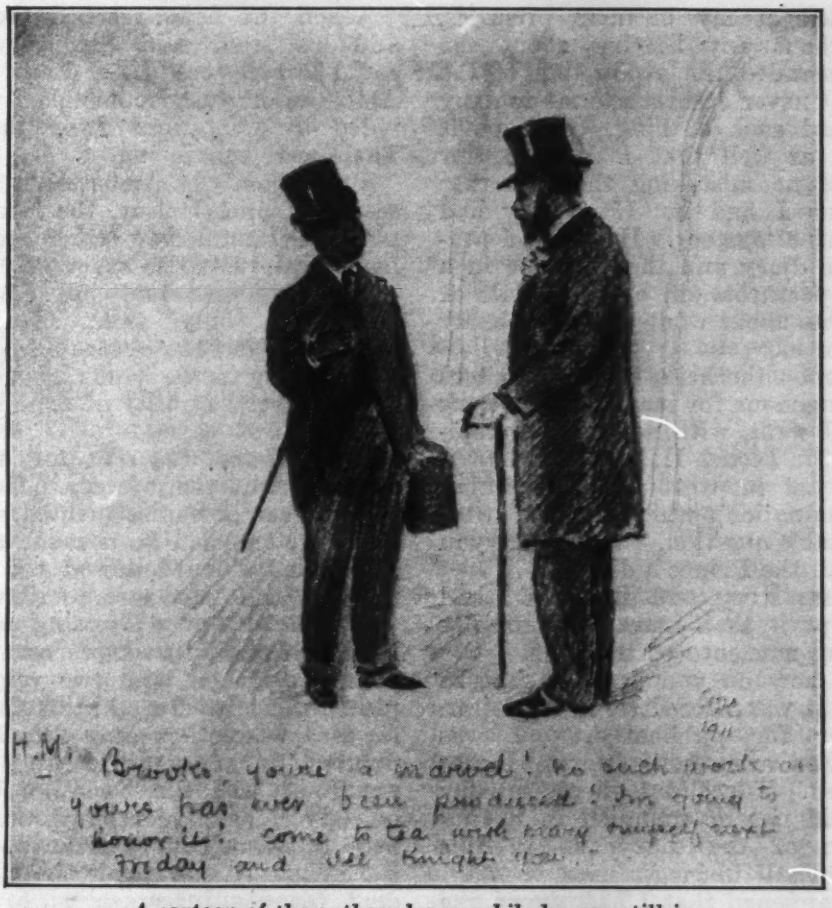
The biggest sum I ever saw him lose on one chance was in a *chemin-de-fer* game. He staked twenty thousand francs on his one card and a woman covered the bet. When the cards were displayed the Prince found himself beaten by one pip. His card was the seven and the other the eight. The lucky woman was the much-married Mrs Jean Nash, who has been known throughout the world as "the best-dressed woman."

Few people are aware that the Prince of Wales keeps a very interesting and extensive diary, in which, from day to day, he chronicles his own doings, those of his friends and of the people he meets, together with racy comment upon topics of the hour.

This diary is one of the features, in the way of a record, of his tours abroad. Each night, whether away from home or in London, H. R. H. devotes an hour or so to recording his impressions of the day.

In this he may be assisted by his private secretary; but it is in the Prince's own fresh phraseology and apposite style that the records of his days are entered up. It is no mere log book of events. The Prince's personality is stamped on every page.

During the Australian tour, of which I have already written, he and Lord Louis Mountbatten were particularly attentive to the diary, with the result that from five hundred to one thousand words were written up each night. Each day's chronicle was handed to the official printer on board the Renown, and copies were made for


H.M. Brooks, you're a marvel! No such work as
yours has ever been produced! I'm going to
honor it! Come to tea with many compliments next
Friday and I'll Knight you.
1911

A cartoon of the author, drawn while he was still in favor at Court.

the Prince so that these could be bound together in one volume.

Only eight copies were to be printed of each daily section of the diary during the Australian tour. Each member of the Prince's personal staff received a copy, while he himself retained the others.

I knew, of course, of the existence of such a diary, although I had never seen it. Then, one day on board ship, some one remarked, "You are in the diary again to-night, Mr. Brooks."

"In the diary? What do you mean?" was my wondering retort. For a moment I could not imagine what was meant. In a few seconds, however, I learned that the Prince had made reference to me in his diary, and that it was not the first occasion on which he had done so.

My curiosity was piqued. I had no desire to pry into the secrets of this private diary, but—what had he said about me? So I managed to obtain the loan of a copy, and there I read some of the Prince's comments about myself. They were amusing for the main part, and both these references and others showed that the Prince saw and noted much more of the life on board ship than most of us suspected!

With such glimpses of the diary as I had, I became interested in it and wanted a copy for myself as an intimate memento of the cruise and the tour. Eventually I struck a bargain that I should be provided with a complete copy of the diary in return for certain photographs.

That was how, when I returned to London after the tour, I came to be in possession of an odd copy of the diary, the existence of which neither the Prince nor Sir Lionel Halsey suspected.

It had been in my possession for months when, one day, I received the shock of my life. Two Scotland Yard

men called at my business premises, and, without any beating about the bush, demanded the production of the diary. It never occurred to me to deny that I had such a thing. Perhaps it was just as well that I did not, for there was no mistaking the fact that they *knew* I had it. How they had known was a mystery. However, I produced the diary and they left me in a state of perturbation, as the result of vague hints about what would probably happen to me.

Close upon the heels of these visitors came a summons for me to attend York House. I went, with not a little trepidation. Sir Lionel Halsey interviewed me and put me through a searching cross-examination, which opened with the inevitable question, "What were you doing with the Prince's diary?"

I told my story, and said that I had really kept it as a more than usually interesting memento of the tour.

"Then how do you account for the fact that it was offered to an American newspaper for publication?" I was asked. For a moment or two I was nonplussed. I realized then that the offence did not lie so much in having possession of the diary, as in this attempt to sell it in America.

It so happened that I had shown the diary to a journalist friend. I knew, of course, that some attempt might be made to dispose of it, with my sanction, but at the time I was not aware that he had, apparently, been already in communication with prospective publishers. As a matter of fact transactions had been carried further than that.

In telling me of this American development, Sir Lionel at once solved my problem of how the Prince had got to know of my copy. Apparently parts of the diary had been cabled to America, and the American Ambassador, learning of this, and fearing that it could hardly be with the Prince's approval, informed the Prince, at the same time effectively preventing any further matter from being sent.

When the news reached the Prince and his staff, said Sir Lionel, they could scarcely credit it. Proof that the Ambassador was not mistaken was provided by quotations from the diary. These were convincing.

But, when the Ambassador came to see Sir Lionel Halsey, the latter could not understand how the diary could have been quoted so exactly by anyone, except from an actual copy. As I have mentioned, only eight copies were known of, and these were all accounted for as being in the hands of people who would never be guilty of making use of them.

The printer was sent for, to throw some light on the mystery. He told of the number of copies printed, and how an extra one had been made and that I had it. Then followed the visit of the Scotland Yard men to me.

I received a good dressing down, but later I learned that more severe measures were taken with two very highly placed officials. In addition to the one for me, yet another extra copy had been printed by some one's order. As a result of this disclosure one of the officials I have mentioned came very near to being court-martialed.

Anyhow it was an unfortunate incident for me, inasmuch as I was forbidden to come anywhere near the Prince of Wales again. King George was, of course, informed of the matter, and the result was a letter from Buckingham Palace in which I was informed that I was not to come to the Palace again until express instructions for me to do so were given. Up to date I have yet to receive those instructions.

When I look back on my long and very amicable association with the Royal Family, I am deeply grieved that its termination should have been caused under such circumstances. Nevertheless I am happy in the recollection of memories more pleasant, memories of intimate contact with our Sovereign and his family, that time will never eradicate from my mind.

THE END

THE PASHA'S PRISONER

By ROBERT BARR

FEW objects on this earth are more beautiful than a consular kawass. His wages may be small, but that is more than compensated for by the gorgeousness of his clothes. His outer garment unites the merits of an Inverness coat, a lady's cloak, an Arab aba, and an ulster. Sometimes it is short and comes only to his waist; often it is long, reaching down to his heels. It is wonderfully embroidered with threads of silver and of gold, and also threads of silk colored green, crimson, yellow, blue, and purple. There are wings attached to this garment at the shoulders, which give the kawass the appearance of a huge bird of tropical climes as he hurries down a Turkish street. And as if this were not enough glory, there is worked on his back the coat-of-arms of the country he represents. The emblems of some countries suit the back of a kawass better than the devices of others. There is Austria, for instance, whose double-headed black eagle stands out strongly in contrast with the rainbow splendor of the coat, and an eagle's head standing out on each shoulder blade makes the balance perfect.

When the consul drives abroad in his carriage, the kawass mounts upon the seat with the coachman, and has his hands crossed over the hilt of a broad semi-circular scimitar—the new-moon-shaped sword which we see the executioner in Eastern pictures wiping on the tail of his coat after he has rolled off a few heads on the pavement. As the kawass usually has great sweeping black mustaches, the addition of the sword gives him an appearance of great blood-thirstiness, which is most impressive. As a matter of fact, however, he is a harmless individual who runs errands for the consul and conducts tourists to mosques and places of that sort, accepting with thankfulness a small gift in recognition of his services.

Mr. Turner's kawass knocked at the door of the consular room, and, on being told to enter, displayed to the consul a face laboring under some powerful agitation.

"Well, what is it?" asked Consul Turner.

"Excellency, the man who disappeared has come back."

"What man who disappeared, Selim?"

"The cold-water man, Excellency."

"Oh, McSimmins. He didn't disappear; he went home, you remember. He sent his papers to me about a month ago, with a request for a permit to leave the country, which was quite unnecessary. You brought me the papers, and I gave them back to you."

"Yes, Excellency," said the kawass nervously.

"So he has returned, has he? What does he want?"

"Yes, Excellency, and he demands to see you; but I thought better not to let him in."

"Why, Selim?"

"I think he is insane, Excellency."

"Oh, that is nothing new; I thought it from the first."

"He is here, Excellency, in a Turkish pasha's uniform, and he will not go away. Then he acted very strangely, and it may not be safe to let him in."

"Oh, nonsense. Let him come in. McSimmins wouldn't hurt anybody."

The kawass departed with evident reluctance, and shortly after an extraordinary figure presented itself to the consul's view. He wore the costume of a Turkish pasha, and had stuck on his head a red fez with a long silken tassel. He came in stepping with caution, as if walking on thin ice. He held his open hand tremblingly before him, as if anticipating a fall, and his head bobbed about in an erratic manner that threat-

ened to dislodge the fez, and kept the silken tassel swaying to and fro.

"I—I—I—I'm afraid," he said, with a stammer, "that you don't recognize me, Mr. Turner."

"Oh, yes, I do," replied the consul. "You are Mr. McSimmins, who came over here to convert the Turk by means of a daily bath, quite ignoring my suggestion that the Turk already performed his ablutions five times a day."

"Ah, yes, Consul, quite true, quite true; but only his hands and feet; and I still hold that, if you submerged the Turk once a day, he would prove a different man."

"Well," said the consul, "I have often thought that if the whole country were submerged for twenty minutes, it would be, on the whole, an improvement; still that is an opinion that must not be mentioned outside of the consular residence. But, as I suggested to you before, if cleanliness were your object, the Turkish bath is not altogether unknown even in our country, and is supposed to be reasonably efficient."

"It is warm and enervating," said McSimmins, speaking with stuttering hesitation, which seemed to show that his theory was not perfectly grounded. "I advocate cold water, you know."

"Yes, I remember you did," began the consul; but he was interrupted by McSimmins suddenly precipitating himself on the floor and clutching wildly at the carpet. The consul sprang to his feet with an exclamation of dismay.

"It's all right," cried McSimmins. "Don't be alarmed. The room is spinning round, but it will steady down in a minute; then I'll get up. Just wait till things come to a stand-still again."

Presently the groveling man rose to his knees, and then tremulously to his feet. "You will excuse me if I sit down?" he asked.

"Certainly," said the consul, also seating himself. "What is the trouble; Saint Vitus's dance or anything of that kind?"

"Something of that kind," echoed the visitor. "I don't really know what the trouble is, but I'll tell you what it feels like. It feels as if my brain had become loosened from the inside of my skull, like a ripe kernel in a nut; then, if I walk hurriedly, it turns over, and the whole world turns with it, and I have to get down on my hands and knees and shake my head till my brain gets right side up again. Do I make myself clear?"

"Oh, perfectly clear," said the consul, edging his chair back a little. "Will you excuse me, Mr. McSimmins, while I call my kawass? I have some business for him to do, and you can tell your story with perfect freedom in his presence, for I make a confidant of him anyhow," and the consul reached his hand toward the bell.

McSimmins smiled grimly. "You needn't be afraid, Consul; I am not going to touch you. Of course no man makes a confidant of his kawass, and you think now that I am crazy. I don't blame you at all; and if you are really afraid of me, draw your chair near the door, and I'll stay over in the remotest corner of the room. But I should like you to listen to what I have to say; officially, that is what you are here for, you know."

"Oh, I am not afraid at all," replied the consul thinking it, however, worth while to add, "I never think myself in danger, because I keep my loaded revolver in the drawer here before me." Saying which, he took the weapon out, and placed it on his table.

"A most sensible precaution," rejoined McSimmins, nodding his head. The nodding seemed to be unfortunate, for he paused breathlessly, put his two open palms up to the side of his face, gave his head a few jerks this way and that, and then murmured, with a sigh of contentment, "That's all right."

The consul thought it well to ignore the re-turning of the brain which was evidently taking place under McSimmins's manipulation, and so he said, as if nothing extraordinary had happened: "When did you return, Mr. McSimmins?"

"Return; from where?"

"You sailed for home about a month ago."

"Oh, no, I didn't," corrected the visitor.

"Well, you sent your papers here, and asked for a permit to leave the counry, and I wrote a note to you saying that a permit was not necessary, and not hearing from you again, I took it for granted that you had sailed."

"Ah, I see," mused McSimmins,

about to nod again, which motion he suddenly stopped by putting his hand to his forehead. "I have never left Turkey; in truth, I have been the guest of Zimri Pasha for the last month."

"Really," said the consul. "Well, the pasha is a most excellent man, and I wish there were more officials like him. He told me he took a great interest in your cold-water scheme and was doing his best to help you, and seemed surprized to hear that I didn't take much interest in it myself."

"Yes, I think I converted him," said McSimmins; "but only this afternoon. About a month ago he sent a messenger to me asking me to bring my papers to him, and added that he would be glad to learn something further of the scheme I had in hand, as he was inclined to believe in it and wished for more information."

"That's what he told me," remarked the consul, "and he expressed his regret at your early departure."

"Very well. I called on him at the hour named, which was after dark. You know the pasha's house perhaps, Consul?"

"Yes; I have visited him somewhat frequently. He is, as I have said, the most intelligent Turkish official I have yet met, and seems to have a sincere desire to elevate the people."

"That describes him exactly," agreed McSimmins. "He delights in the elevation of the people, and is very successful at it too."

"I shouldn't go so far as to say that," demurred the consul. "I have never observed any practical results from his endeavors in that line."

"Ah, there you do him wrong," pleaded McSimmins earnestly. "You see I know the pasha better than you do, for I have been his guest for a month. But to go on with my story. On entering I was led past the semi-public room in which the pasha transacts his business, taken across the first court, in which the palm trees grow, into a smaller room beyond, a room along the three sides of which were divans covered with rich Oriental rugs, and here, asking me to be seated, the attendant disappeared between the heavy curtains which hung over the doorway. Presently that obsequious secretary of the pasha came in, followed by a servant bearing a tray on which were two tiny cups of coffee. The secretary saluted me with that groveling deference of which he is the cringing master, and asked me to be good enough to give him all my papers, so that the pasha might scrutinize them. The pasha, he added, would have pleasure in meeting me socially after the business was transacted. I had my passport and other papers in a blue envelope, reposing in my inside pocket, and this envelope I handed to the secretary. He then bade me, in his master's name, regale myself with the coffee, which I did. I imagine the coffee was drugged, for shortly after taking it I became sleepy, and remembered no more until I found myself securely pinioned in the Court of the Great Fountain. Have you seen the Court of the Great Fountain?"

"No," replied the consul, "I have never been admitted further into the residence of the pasha than the Court of the Palms."

"The pasha's house is an enormous conglomeration of buildings, somewhat resembling a stone-walled city. Beautiful as the Court of Palms is, it does not compare with the magnificence of the Court of the Great Fountain. The pavement is a mosaic of various colored marbles, all the rest is of the purest white. Arabic arches are supported by slender glistening pillars, which seemed to me to be made of onyx, or some rare white stone. The arches themselves are of marble, looking like carved virgin snow; these form a broad, cool veranda that completely surrounds the court. The floor of the veranda is elevated perhaps six inches above the tesselated pavement, and is almost covered with rich Persian rugs. But the striking feature of the court is the fountain. The water, I imagine, is obtained from some stream or lake in the neighboring mountains, and the fountain consists of one huge jet as thick as a man's thigh, which shoots straight up into the air like a liquid palm tree. It falls back musically into a deep, broad pond, which is bordered by a heavy coping of marble. The convolutions of this coping form a margin to this pond that is amazingly irregular, and which, the pasha told me, spells out in Arabic his favorite text from the Koran."

"What an excellent idea," interrupted the consul.

"Isn't it?" agreed his visitor. "Perhaps I didn't appreciate it at the moment as much as I should have done, for I found myself in a most cramped and uncomfortable position. A stout stick had been thrust under my knees, and my arms had been drawn under the projecting ends of this stick until my knees struck against my breast. My wrists were strapped together, and the straps fastened in some way behind my back. My ankles were united by fetters, and I lay thus in a helpless heap like a trussed fowl. The pasha sat cross-legged on a pile of rugs and pillows under the veranda, peacefully smoking a water-pipe, of which the hubble-bubble was drowned by the musical plashing of the great fountain. He sipped now and then some coffee from a little cup on a table by his side, and regarded me placidly with that serene, contemplative gaze which you may have noticed in his dreamy eyes when he is inclined to converse on philosophic subjects. Standing near him were four stalwart Nubians, black as ebony, whose tongues the pasha afterward informed me he had been compelled to order removed, as irresponsible gossip among his menials was irksome to him.

"After a time the pasha was good enough to address me. He expressed in choice phrase his pleasure at seeing me a guest under his humble roof, although at the moment the roof above me was the sky, besprinkled with brilliant stars. He added that he had been much interested in my cold-water scheme, and would be pleased to learn from my own lips how I was getting on since I had honored his district with my presence.

"I replied, with a glance at my bonds, that just at the moment I was not getting on with any degree of rapidity. The pasha was condescending enough to smile at this and bow toward me. Then, after a few whiffs at his pipe and a sip of coffee, he proceeded with the utmost suavity: 'I have been giving some attention of late to the cold-water problem, and have determined to make some practical experiments that will test its value. The marble coping round the fountain at your back was constructed by a Greek slave whom I once possessed, and who, although he had most artistic hands, labored under the affliction of a flighty head, which I was compelled to remove. Under my directions, he did his work well, and the coping spells in Arabic the phrase, *If you meet a friend in the desert who lacks for water, give him of your store plenteously.* I now propose to vivify this motto by following its counsel on your behalf.'

"'Indeed, Pasha,' said I, 'there is a sufficiency of water about me already, and my clothes are even now wet through.'

"'My Nubians,' returned the pasha calmly, 'were reluctantly compelled to dip you in the fountain, so that you might return to the full enjoyment of your senses, which had seemingly departed from you. This submersion has happily had the desired result, and thus I have the privilege of holding converse with you. But my bounty does not stop so meagerly. The adage says *plenteously*, and upon that adage I purpose to act.'

"'I beg to call your attention, Pasha, to the fact that I am a citizen of a country at peace with the government of the Sultan. With the utmost respect toward your authority, I hereby protest against my present treatment, and warn you that if you contemplate further indignity, you will carry it out at your peril.'

"The pasha stroked his beard, and acknowledged my remark with a courteous bow. 'That introduces the elements of an international discussion into our conversation,' he said with a reproachful tinge in his tone, 'and in social intercourse I think anything of a political nature is apt to prove a disturbing subject. Let us confine ourselves to your cold-water theories.'

"With this he made a sign to his Nubians, and two of them, springing forward, picked me up as if I had been a bale of goods, and swaying me backward, suddenly heaved me into the up-spring of the fountain. The tremendous jet of water struck me on the back as if it were a battering ram, and I felt myself projected into the air like a shot from a cannon's mouth. Unfortunately, I have not at my command the language to depict the horror of

that moment. I was whirled round and round with dizzying rapidity, and when I tried to scream, the water dashed into my open mouth with choking force. My agony was mental rather than physical, for, except when I turned over and lay mouth downward to the jet, I cannot say there was much bodily inconvenience. Once when I remained for a few moments in a sitting posture, I saw that I was high in the air above the tops of the tallest palms, popping up and down like a pea on a hot griddle. In spite of the motion, I could easily recognize the deserted city lying calm in the moonlight, and so remembering the hard marble pavement far below, I feared that I would tumble helplessly over and be smashed into fragments on the stone. Such a catastrophe, however, did not happen, and by and by I realized that it was quite impossible to escape from the influence of the water jet. The great danger was of being smothered in the spray—drowned in mid-air. I had the peculiar sensation of sinking into a watery cushion from which the rebound dandled me as if I were a baby. Sometimes, when the powerful fountain gave me an extra fling aloft, I turned over and came head downward with sickening swiftness into what seemed to be a hollow tube of water. Then I came near to suffocation; but at once the heaving column would reassert its power and toss me aloft again, when I could breathe once more. Now and then I caught a glimpse of the full moon in the cloudless blue sky, and it appeared to be dancing a hilarious jig with me. In spite of the noise of the water, I heard the pasha clap his hands and express approval of the spectacle. 'Excellent, excellent,' he cried. 'The gifted McSimmins dances with gratifying ability.'

"My torture ended for that night with a moment of most intense fear. I imagine that the pasha gave a sign, and a slave, with a lever, suddenly turned off the water. I seemed left for an instant suspended in the sky; then I dropped like a falling star. The concentrated anguish of that infinitesimal portion of time I shall never forget. It was in my mind that the pasha intended to impale me on the stand-pipe from which the jet issued, but such was not the case. The water was turned on again before I reached the level of the veranda, and such was the terrific force of the impact, it rising and I falling, that I became instantly insensible; and when I woke to consciousness, I found myself stretched on some rugs under the veranda, my wet garments removed. But perhaps I weary you with this lengthened recital?"

"On the contrary," said the consul, "I was never more interested in my life."

The visitor nodded, and having disturbed his brain by doing so, readjusted it by manipulating his head with his hands.

"I was taken to a cell in which there was no light and very little air, and there I lay all night unable to sleep, sprawling round on the floor, which seemed to be heaving under me. Next evening I was taken out again, and once more flung into the fountain. All the while I anticipated that dreadful drop again; but the pasha, fearing probably that he would kill me outright, amused himself by modifying the torture. The slaves gave periodical jerks at the lever, cutting off a little water at a time, and lowering it a few feet, so that I descended by stages until almost on a level with the veranda; then I would be shot up into mid-air again. Night after night of this gave me that loosening sensation in the brain of which I complained to you, and the result of which you saw when I fell on the carpet. I sometimes got a little sleep in my cell during the day; but my rest was always broken, for the moment I began to dream I was tossing in the fountain again. At last I saw that insanity was bound to intervene, so I resolved on suicide. One evening, being more loosely bound than usual, I turned, by a great effort, a kind of somersault, and flung myself free of the column of water. I hoped to strike the marble pavement, but I fell instead into the pond, and was instantly fished out by the Nubians. I told the pasha I was determined to kill myself, and so for several nights I was not brought out from my cell. Sometimes I thought that he had relented; but when I reviewed the situation carefully, I saw that he dare not let me go, for if I could get my government to believe the extra-

ordinary tale I had to tell, it would be bound to bring him to book for his conduct. When again I was dragged into the Court of the Great Fountain, I found that in the interval he had built a sort of basket around the stand-pipe. This was made of springy steel or iron, and it opened like a huge flower, upward, something like a metal calla lily, if you understand what I mean.

"'I should be delighted, Mr. McSimmins,' said the pasha most blandly, 'if you would favor me again with your vault from the top of the column.'

"I favored him, and fell into the network of the basket, and was hurled instantly into the jet, and aloft again almost before I realized that I had dropped. This amused the pasha very much, and he was loud in his praise of the feat. Wishing to test still further the efficiency of the basket, he had the fountain gradually shut off, and let me come down into the receptacle; then the Nubians took me out of it, undid my bonds, and set my limbs free. When this was done, at a sign from the pasha, they flung me sprawling into the basket. I clasped the network and shrieked, while they pushed me farther in, until at last the water caught me, and once more, breathless with its force, I found myself aloft; but this time with arms and legs loose, sprawling like the wings of a wind-mill gone mad. I was amazed to find after a time that, because of this freedom of the limbs, I could somewhat balance myself, and before the night had passed I was able to stand upright and tread water, as it were, keeping my position for some time by the exercise of great care. Of course every now and then all my calculations were overset by the sudden ceasing of the fountain, which, removing my support and instantly undermining my confidence, left me floundering helplessly in the basket, until the stream resumed its play.

"After the basket had been constructed, the pasha, apparently selfishly, wished to enjoy the spectacle alone, and accordingly sent his slaves away, and they remained absent until the clapping of his hands brought them into the court again, when I was lowered and taken to my cell. And now, Consul Turner, you see how I have been treated. I have no complaint to make, and do not intend to give you any trouble in this matter at all, but I am fatigued with talking, and if you will charitably allow me a bed in your house to-night, I will be deeply grateful to you."

"Certainly, Mr. McSimmins, certainly. But how did you escape?"

"If you will permit me, Consul, after the manner of the Arabian Nights, to leave the remainder of the story untold until to-morrow morning, it will be a great kindness to me in my present state of fatigue."

"But it won't take you long, Mr. McSimmins, to give me the climax. Do you mean to say that this treatment of you lasted the whole of the past month?"

"Up to this very evening, Consul. I have my own reasons for wishing to postpone the culmination of my narrative until to-morrow morning, if you will be so good as to indulge me. You see that I am in a shattered condition, my nerves are wrecked, and although I do not know that I can sleep, I should like very much to go to bed."

"You are perfectly safe here," said the consul, "and need have no further anxiety. I will make my kawass sleep outside your door to protect you."

"No, no, Consul. I don't want a Turk near me, and I distrust your kawass and all the rest of them. Would you mind to-night, if you have a double-bedded room, being in the same room with me?"

"I can do better than that," said the consul. "There is a room opening off mine, and I will have a bed put in it; then no one can come near you without passing through my room."

"That will do excellently," said McSimmins, seemingly much relieved.

"The difficulty in obtaining redress," continued the consul, "will be in proving what you say; but somehow I find myself believing your story, incredible as it seems, and I also believe the pasha's secretary gave your papers to my kawass, which, in a way, is direct proof. I shall call the pasha to account to-morrow morning."

"No," said McSimmins, "I do not wish redress, nor do I ask you to take the slightest trouble on my account."

"But such treatment of a free citizen of a friendly country is intolerable, and

we must at least attempt to obtain justice, although I am not confident that you will get any satisfaction."

"Well, if you don't mind, we will discuss that to-morrow morning. I really feel unable to cope with even the simplest problem to-night. Remember, I spent the fore part of this evening at the top of that fountain."

The consul, without more ado, led McSimmins to his chamber, and several times that night heard him thumping round the room on the floor. Early next morning, when he entered his guest's room, he found him lying awake. "I am afraid," he said, "that you did not have much rest last night."

"Oh, indeed, I feel quite refreshed."

"Now will you excuse my curiosity and tell me how you escaped?"

"That was, after all, a very simple matter. I don't know whether I told you that, latterly, to save themselves trouble, they got into the habit of flinging me into the fountain stark naked; but, as I think I mentioned, I became quite expert at balancing myself on the top of the jet. Last night, when the slaves had departed, I put my hands over my head and projected myself into the air, endeavoring to fall clear of the basket, which I did. In a moment I scrambled over the marble coping, and I think the pasha was dozing, for he made no motion either to stop me or to call his slaves. I was afraid my brain would play me a trick, and so I acted with intense celerity. In a moment I was at his throat, and had him pinioned and helpless on his back. Gripping his windpipe with my left hand, I undid his scarf with my right, and soon had it bow-stringed round his neck——"

"You surely did not strangle him?" cried the consul horrified.

"Oh, no, I shouldn't think of doing such a thing. I have a great respect for the position of pasha. I gagged him so that he could not cry out, and tied his hands so that he could not clap them together. Then, with some difficulty, I stripped him, and dressed myself in his clothes. He seemed stunned very much by the suddenness of my onslaught; and seeing that he was too panic-stricken to cry out, I ungagged him, and unbound his hands. Then picking him up—all the time I was struggling with him, remember, I saw three pashas, my brain wobbling about like loose nails in a rolling barrel; but I steadily concentrated my attention on the middle pasha, and resolved to attend to the other two afterwards if they should be still there—picking him up, then, as I say, I flung him, back downward, into the basket, and before you could snap your fingers, he was dancing on the water-spout high above the palm trees. The other two pashas had gone up with him; and so, folding his robes around me, I walked calmly down the passage, through the Monkey Court, along the other passage, through the Court of Palms, and so out into the street, unimpeded, the watchman opening the gate for me and closing it behind me without a word. That is the beauty of having well-trained servants, unaccustomed to question any act a man does. From there I came directly to your residence, and here I remain until you can get me on shipboard."

"But, McSimmins, you don't mean to say you have left the pasha there all night?"

"I have but followed his own Arabic text, which you will find engraved around his fountain. I have given him water, and plenty of it. It was not for me to interfere further. I did not tell you last night, fearing you might consider it your duty to intervene. If the pasha likes his position at the top of the fountain, he has doubtless remained there; and I can assure him, from experience, that it will take him several days to learn to make the dive I made."

"Oh, but this is most serious, McSimmins, taking the law into your own hands in that way and endangering the person of the pasha."

"I took the pasha into my own hands, but there is no law in his caravansary."

At that moment the gorgeous kawass rapped at the consul's door. "Excellency," he said, a thrill of fear in his quivering voice, "news has come that the Pasha Zimri has been found drowned in his own fountain."

"Ah," said McSimmins grimly, "every situation has its compensations. If he has had too much water in this world, it is not likely that he will have to complain of an over-supply in the next."

CONSTRUCTIVE FINGER SURGERY IN THE TREATMENT OF DEAFNESS

IN MAY, 1925, we published a paper on *New Successes in Treating Deafness* which attracted an unprecedented amount of attention and brought us hundreds of letters, letters of inquiry and approval and confirmation, often ardent confirmation chiefly, and something like a dozen all told objecting, detracting and even in the case of Dr. ———, a Chicago medical aurist, reviling us and questioning our legal right to send such "fraudulent matter" through the United States mails.

In a courteous response we pledged ourselves to him, as we did to others, to investigate this vital matter further.

We sought the opinion of every registered osteopathic physician in the United States and Europe; nearly all responded and we found that Dr. Muncie and his method had the approval of between ninety-seven and ninety-eight per cent. of these confreres. Many of these physicians had attended one or more of his clinics in the United States or Europe and based their statement upon the results they had witnessed; or through results obtained in their private cases after former methods had failed.

The other two or three per cent. objected to the publicity given to Dr. Curtis H. Muncie.

But if men are dying of thirst in the desert are you going to forbid another to point out the water hole because that would be giving publicity to Jenkins, its owner?

Publicity for Dr. Muncie was an inevitable incident of publicity for a piece of extraordinary news for the deaf.

It is not to give any medical men publicity that a steady stream of news of their achievements and discoveries flows through the papers and magazines. That news came to us and that article was under consideration before any one in this office ever saw Dr. Muncie, and it was as a patient that his first visitor from this office went to him.

We have carried out our pledge and acquainted ourselves yet more fully with the results of constructive finger surgery and treatment in deafness. One phase of the matter was curiously easy. The few letters from medical men condemning and rejecting Dr. Muncie and his method, and the two published verdicts against him (all coming from medical sources) came in every case from people who had made no personal examination of the method nor its results. They candidly spoke altogether from *a priori* reasoning and from hearsay. They were not competent witnesses. When it comes to proving a negative against a great body of responsible testimony, such expressions of emotion are merely idle.

We believe that it would be worth while for some competent body to investigate Dr. Muncie's work, and the magazine would suggest that the board at Albany which examines and licenses doctors of medicine and doctors of osteopathy make this examination. The osteopaths of New York State must pass the same examinations as the doctors of medicine. The law reads:

"The board shall submit to the regents, as requested, lists of suitable questions for thorough examination in anatomy, physiology, hygiene, chemistry, surgery, obstetrics, gynecology, pathology, including bacteriology, and diagnosis. . . . *Any examination shall be the same for all candidates.*" Dr. Muncie passed this medical examination in 1910. In the interest of the deaf, why not make a comparative test of both this method of treating deafness and the regular or orthodox method?

"There is a principle which is a bar against all information, which is proof against all argument and which cannot fail to keep a man in everlasting ignorance. That principle is *condemnation before investigation.*"—*The Editor.*

Steel corporation employees' children in a company kindergarten, learning the "Story of Steel."

THE LIFE OF JUDGE GARY

By IDA M. TARBELL

CHAPTER X

Gary and the War

LEADERSHIP demands fitness—physical fitness—else the resolution, patience, equable temper of the leader becomes jaded, unreliable. Headaches have played a part in the loss of more battles than Waterloo.

The chief executive of the Steel Corporation, whatever his conflicts and his uncertainties, had always taken good care to keep his body fit, his mind clear. Two months of Europe had been his chief relief and tonic from 1906 to 1914, the point we have reached in this narrative, two months properly voted by the finance committee, for in August of 1903 that body had deemed it wise to pass a by-law requiring official permission for vacations. Judge Gary, even now, never takes a vacation without this official permission.

The spring of 1914 found him in special need of the relief of Europe.

So late in June he and Mrs. Gary sailed. It was their custom to make Paris their headquarters, motoring in whatever direction they pleased. In their trips they had become thoroughly familiar with western and central Europe and with Great Britain—scenery, folks, towns, cathedrals, and especially pictures, for that first picture-pilgrimage of Judge Gary, made in 1897, of which I have already spoken, had developed into a settled interest. He studied pictures and had become an intelligent and careful buyer.

An interesting angle of the social side of these annual tours was the contact with the European leaders in iron and steel—a superior and highly trained scientific and business group.

Among the friends Judge Gary had made in this association was the head of the commercial department of Krupps,

Baron von Bodenhausen. There had long been talk of a visit at the Baron's Bavarian estate. There had been invitations from the Garys for Paris, but it was not until the summer of 1914 that the pleasant plans matured, and Baron von Bodenhausen and his wife came to Paris, arriving about July 20th. Three days later, July 23rd, Austria presented her ultimatum to Serbia. Baron von Bodenhausen was thrown into the deepest depression by the text. It meant war, he told his host, for, in his judgment, Serbia could not, or would not, give an answer satisfactory to the Austrians.

"How will it begin?" Judge Gary asked him.

"When Austria declares war, Russia will act. She cannot allow Serbia to be destroyed. When Russia mobilizes, so will Germany, and as France will support Russia, Germany will begin by attacking France."

"And England?" Judge Gary asked his friend.

"She will keep her hands off."

"If she does not?"

"Then," said the Baron, "I fear the destruction of Germany."

Judge Gary was, of course, familiar enough with the talk of war which for years had agitated the high political, military, and industrial circles of Europe. He had come to believe, from what he had seen and heard in these years, that war between France and Germany was inevitable, so when three days later, at five o'clock in the morning of Sunday, July 26th, the Baron knocked loudly at his chamber door, announcing joyfully, "There will be no war—Serbia has sent an answer so conciliating that it cannot be refused," the Judge shook his head.

"I hope you are right, but I don't see it. I think Germany *wants* war." Yet he did not see it so near as immediately to change his plan of starting on Thursday of that week for Carlsbad. On Wednesday he went to his bank for a supply of German and Austrian currency, only to be told that no rates of exchange were quoted. Judge Gary was too money-wise not to see the portentous meaning behind the information. He decided to postpone his trip.

Tense and terrible days followed, days when the city of Paris waited for the war which she felt rather than knew was now a certainty.

And now a new and distressing anxiety arose. France and central Europe were alive with American travelers, who hurried to Paris as rapidly as transportation, turned overnight from

International Newsreel Photo.

Judge Gary, Major General W. F. Sladen and Charles M. Schwab, watching a plane flight during the War with Germany.

Personal. OYSTER BAY. LONG ISLAND, N.Y. June 5th, 1915

My dear Judge Gary:

I want to congratulate you most heartily upon the outcome of the suit against the United States Steel Corporation. It is a great personal victory for you, because one of the main counts of the suit was the action of the Steel Corporation in acquiring the Tennessee Coal & Iron Company; and you were directly accused of deception in connection with that purchase. The Court has now declared that your action in this matter was absolutely legal and honorable. Personally I was able to declare when I testified in the suit that my subsequent investigation showed that your statements to me were absolutely true. As you know, the investigation which I had the Bureau of Corporations make into the affairs of the Steel Corporation convinced me that there was no warrant for the suit against you. I appreciate the important part that your counsel has had in establishing the course of conduct of the Corporation; and I therefore congratulate you on the vindication you have received at the hands of the Circuit Court.

With best wishes, I am

Faithfully yours,

Theodore Roosevelt

Hon. E. H. Gary,

71 Broadway,
New York City.

peace to war purposes, could take them. They arrived half distracted from the hardships and alarms they had suffered, often sans luggage or money, only to find the ships on which they had return passage had been commandeered.

The American Ambassador to France, Myron Herrick, came at once to the rescue of his stranded compatriots. One of his first moves was to ask Judge Gary to form a committee to assist the beleaguered and act as chairman. This committee was organized on August 4th, the day after Germany declared war on France, and until the end of the month held daily meetings. There are hundreds of Americans who have reason to be thankful that in August of 1914 the head of the United States Steel Corporation was giving his time and trained ability to arrange for their safe and prompt return to their own land. As for Ambassador Herrick, he has said more than once in public, "I

don't know what I would have done without Gary."

Judge Gary came back from the exciting work of rescuing American tourists from the path of war to find the United States in the grip of the worst depression that he or any one of his generation had seen. Tens of thousands of people in New York City alone were out of employment. All over the country men were walking the streets looking for work. He immediately threw himself into the relief movements on foot, and at the same time took upon himself particularly the work of encouraging and counseling his associates in the Corporation.

They needed it, for never had they been so heavy hearted as in 1914. Their earnings were lower than in 1904 or 1908—the periods they had always looked back to as the worst they would ever be asked to weather! Again the dividends on common stock had to be passed, again men had to be laid off—nearly 50,000 of them in the Corporation—and yet, difficult as things were, wages were not lowered in 1914. There was a determination that that should be the last move.

It was the war, coming on the top of two years of depression, which made the situation so disastrous; but it was the war which brought them out of unemployment and depression, for early in 1915 the warring countries began calling on our resources—food, ammunition, clothing, shoes—all that armies and navies required were sought in this country. Iron and steel and their products are basic needs in wars; and nowhere in the world outside of the warring countries was there any group so splendidly equipped to supply the demand as the United States Steel Corporation.

It was natural then when the warring nations of Europe looked outside for help in steel and iron, they thought first of the Corporation. It was not long before their demands were taxing not only its full resources, but those of the entire American industry.

Work—work for everybody—brought relief even if that relief came through the horrors of war. The tragedy of unemployment which had lain over the country throughout the fall and early winter of 1914-1915 passed. Prosperity had returned.

A genuine satisfaction was soon added to Judge Gary's relief in the break of the long depression, for in June, 1915, the four judges who had heard the testimony in the suit the government had brought nearly four years before returned their opinion. They agreed that the government had not made out a case that should be followed by a decree of dissolution. Their reading of the Sherman Antitrust Law was different from the Government's and much closer both to the text of that law and to the various opinions which had been laid down up to that time in the effort toward its interpretation.

The act was meant to protect trade, they pointed out. It was not aimed at size or power, but their possible abuses. It was not intended to force competition, but to prevent interferences with competition. It was not concerned with combinations, however monopolistic in their original intent, if that intent had proved abortive or had been abandoned, but at monopolies which destroyed the "potentiality of competition."

It was on this reading of the law that Judge Buffington, of the Circuit Court, based his opinion. He sought in the testimony answers to two questions:

"First: Was the Steel Corporation, when this bill was filed in 1911, prejudicing the public interests by unduly restricting competition, or unduly obstrucing the course of the steel and iron trade, between the states or with foreign nations? If this question be answered, yes—the law was then being violated and an injunction should issue to restrain present and future violations.

"Second: Did the Steel Corporation, when it was formed in 1901, by the intent of those forming it, or by the inherent nature of that company's contemplated acts, prejudice the public interests by unduly restricting competition or unduly obstructing the course of the steel and iron trade, interstate or foreign? If this question be answered, yes—then the law was violated, and the Steel Corporation must be adjudged originally illegal. If illegal, it must be dissolved."

The facts he marshaled from the testimony in answer to his questions came

like news to many of those who read them. He pointed out the surprizing fact that while in 1901 the Corporation had made and sold about 60 per cent. of the steel and iron produced in the United States, in 1911, when the suit was brought, its competitors had the 60 per cent. of production and the Corporation the 40 per cent. Nor had the change in percentage been forced upon it, as one of the judges in the case intimated, for Judge Gary had intentionally curtailed the production. His conclusion was not to allow in any branch over 50 per cent. of the business, and oddly enough, it was William Jennings Bryan who set this per cent. for him! Along in 1906 Bryan was advocating 50 per cent. as a legal limit for the size of a business, and Judge Gary had seized the figure.

A fifty-ton metal ladel and crane.

The Steel Corporation was not a monopoly in 1911, for its competitors had a majority of the total production. To be sure, it had grown. It was mining a little over $13,000,000 worth of ore in 1901, and about $20,000,000 worth in 1911; the gross receipts were $560,000,000 in 1901 and $615,000,000 in 1911. Everything considered, there had been about a 40 per cent. increase in its business in the ten years. But its chief competitors had all made a higher proportionate gain: 90 per cent. for the Republic Iron and Steel; 155 per cent. for the Cambria; 206 per cent. for Jones and Laughlen; 3779 per cent. for the Bethlehem. Its own growth had come partially, too, from developing a foreign trade in countries where heretofore no nation had had much trade.

Competitor after competitor testified that while the Corporation was a hard-headed one, it was fair, often generous and that *nobody feared attack from it*, a striking contrast to those great combinations where strength was so systematically used to injure that competitors lived in a kind of chronic panic, without confidence or peace, frequently "seeing things" where there was nothing.

But how about the second question? Was it the intent in 1901 to monopolize and restrict trade? Judge Gary had always contended not. They sought a "rounded proposition." Robert Bacon, certainly a witness of character and at the center of negotiations, said: "It was said by all those gentlemen present — I believe by all of them; I know by Mr. Morgan —that under no considerations would they take part in anything which was or might be considered to be a monopoly, or any attempt to restrain competition. I know that that was one thing furthest from his willingness to participate in."

Mr. Schwab was equally emphatic as to Mr. Morgan's idea in forming the Corporation: "From the moment when I first started with Mr. Morgan, the question of our gaining a monopoly or in any way controlling the steel industry was never mentioned. My whole argument with him, as advocating this company, was the economic development of the same, and the matter, to the best of my knowledge, never came up thereafter."

What, then, were they attempting? Judge Gary explained it once in these words: "There was an effort made to acquire properties that would be useful to each other, and by that I mean to acquire a plant that furnished certain commodities to another plant which we were acquiring, and to acquire the latter because it could, at good advantage, secure the products which it needed for its uses, and so all through the line, from the ore down to the conversion from one product into another and the final distribution of the finished product."

Reviewing the testimony Judge Buffington gave a "No" to his second question.

But if the Steel Corporation was not

criminal in 1911, nor had a criminal intent in coming together, one of its practises abandoned in 1911 was condemned in both opinions as a restraint of trade. "The Gary dinners," wrote Judge Woolley, "were in effect pools."

"But the period of cooperation had passed away before the bill was filed, and as far as we can see it is not likely to be repeated. We do not think the Gary movement (the 'Gary dinners') would justify us in imposing so drastic a penalty as the dissolution of the corporation, but we will, if the Government moves for such action, retain the bill for the purpose of restraining any similar movement by the defendants that might be contemplated hereafter."

There was great rejoicing in steel circles. Many congratulations on all sides for "the good trust." Nothing Judge Gary received pleased him better than the characteristic letter from Theodore Roosevelt reproduced on page 431.

The immediate effect of the opinions handed down by the judges was greatly to encourage Judge Gary in his belief that in the end the conduct of the Corporation would save it. A long period of waiting was still before him, however. The Government carried the case to the Supreme Court, and it was not heard until March, 1917. Seven judges heard the case, but failed to return a majority opinion, and a reargument was ordered.

Almost simultaneously with this order came a request from the Government to Judge Gary, as President of the Iron and Steel Institute, to form and head a committee of steel men to mobilize the nation's industry for the war which was now a certainty. In the last two years the American industry had been making money on foreign orders at an unheard-of rate. The Steel Corporation's earnings in 1916 had been more than twice what they had been in any previous year in its history—over $333,500,000. All its competitors were prospering equally. Would they accept the lower prices the Government was sure to insist on—increase their plants—make the gigantic effort it asked?

Judge Gary had not a doubt of it. He proposed that the Corporation should cooperate to the limit, and he believed that the majority of the trade outside would do what the Government asked.

He had a nice task. The Government was grimly determined from the start to get its supplies at what might be called reasonable war prices. The first business of the chairman of the steel committee was to bring his associates to accept a list of prices the President would approve.

"There is a disposition on the part of Government officials to cooperate with the business men in promoting the welfare of the country," he told the members of the Iron and Steel Institute at the first meeting after the War began. "This is what all of us have desired and advocated, and now we will probably have as much opportunity in this direction as we have ever desired."

They were to have just that and there were not a few of them who were to receive their first lessons in the meaning of governmental cooperation. They discovered that it meant placing the general good above private ambition.

It was not the work the Government asked of them at which they balked. They were willing to a man to tackle anything however untried, whatever the expenditure it required, however certain that, the war over, the equipment would be scrapped; but they demanded to be paid; and in the months between the May and October meeting of the Institute there were many exciting tussels over prices between the committees representing the iron and steel industry and those representing the Government. Judge Gary was spokesman of the steel men—not of the Government. It was his business to see that the industry received what was fair, but he would not fight for more; and there were certain strong leaders in the industry that did. More than once the meeting broke up in those early months of the War because certain steel men stood out for higher prices than the Government was willing to pay.

"Wait," said Gary to the Government committee one day when the recalcitrant steel men had walked out of the meeting. "I will bring those men back." "You are asking more than you ought to have," he told his associates, and after half an hour's discussion, he kept his promise. The commit-

World Wide Photo.

Judge Gary, President Coolidge and John D. Rockefeller, Jr.

tee reconvened, with the result that the debated price was referred to him, with power.

By October the committee was working in fair harmony.

Throughout the War he kept up his effort. All of those who worked close to the Judge and his executives in the War have testified to both the efficiency and the willingness of his cooperation. Colonel F. A. Scott of Cleveland, Ohio, who, at the suggestion of Secretary Baker, was made chairman of the General Munitions Board on March 31st, 1917, and later, in July, chairman of the War Industries Board, speaks warmly of the help that he received from the Corporation. He pays a high compliment to Judge Gary—one that not many men earn in such situations—that in all of these early negotiations he "showed the patience of a statesman who understood that you must give time to allow the mental column to close up."

R. S. Brookings, who in the spring of 1918 was made chairman of the price-fixing committee which covered the products of some two hundred factories and who constantly came into contact with Gary at the meetings where the prices of steel products were settled, says in a letter to the writer:

"As Chairman of the Price Fixing Committee it was my privilege to be very closely associated, during the War, with Judge Gary, who was spokesman for the entire steel industry. As steel was the keystone of our War needs and maximum production at a fair price was no easy problem, I have only the greatest admiration for the fairness and skill with which Judge Gary met the views of the Government and, at the same time, reconciled and satisfied the great variety of interests which he represented."

Now, this was the public side of the work of the Judge in this period, but as chief executive of the Corporation he had an even heavier responsibility. The Corporation was on its mettle, proving not only its efficiency and usefulness in a time of stress, but its good will. An unprejudiced examination of the available material from the various agencies charged with the conduct of the War proves that everything asked of it was done. Not only that but, according to Colonel Scott, certainly for many months in a position to know, "If there was a difficult and undesirable job to be done, the Corporation took it."

This is the more praiseworthy, because they were in a position to select their own tasks. Mr. Farrell had been made chairman of the "Sub-committee for Ascertaining Capacities and Supervising Allotments of Orders to Manufacturers." He never spared his own people; never failed to help a competitor. Frequently a concern found itself short of materials required for an order allotted and to be delivered by a certain date. Mr. Farrell, under Judge

Gary's instructions, supplied them, whether it was billets or nuts, and at a price below his own cost if the other concern stood to lose on the contract, as was sometimes the case. They must be allowed to make a little money if they were to carry on. Such transactions were frequent throughout the War.

There were voluntary acts of foresight which prevented disasters. For example, the Washington purchasing bureau refused to provide extra supplies of manganese. It would not be needed. Judge Gary and Mr. Farrell knew better and the Corporation laid in 600,000 tons. When the shortage came, they sold to their competitors at the price they had paid. The close of the War found them with 200,000 tons on hand.

The governmental agencies came to them in tight places. At one time it looked as if the reserve of block tin for food containers was near exhaustion. A big credit was needed in London to insure a supply. The Corporation was asked to put up one million pounds, sterling, to carry on the trade which was with the Malay Straits. It did so and the generosity not only saved the situation but rebounded to the benefit of the country from which the supply came.

Extraordinary tasks were put upon the Corporation—tasks in which they had had no experience—which demanded huge sums of money and which would be dropped at the end of the War, such as building ships and, in 1918, an ordnance and munitions plant with a capacity of "twelve 14-inch 50-caliber guns—or equivalent—and of 40,000 shells per month."

Taking it all in all, the cooperation which the United States Steel Corporation gave the Government of the United States, from the hour that it first appealed to it in March of 1917, before the declaration of war, was wholehearted and of the highest efficiency.

The War over, new problems confronted the Steel Corporation. Here it was with shipyards, with an arsenal building, with immense expansion of all kinds in and out of what it considered its line. What should it do? How contract? And was it to be allowed to live?

The Government's plea for its dissolution was on the docket of the Supreme Court. In a few months it might be ordered to go out of business as a corporation—returned to the hundred or so companies from which its subsidiaries originally were formed. It was a staggering idea, but they must face it, waiting the Government's time.

A more immediate problem, one all signs showed it must take up as soon as the war machine stopped, was the old one of labor. Organized labor was preparing war on the open shop. It had given full and intelligent cooperation in the War; now it proposed to assert its claims for recognition by all industries. The steel industry was its chief opponent, and the Steel Corporation with its 40 to 45 per cent. of the business was the point in the industry it was certain to attack.

To that attack the Corporation opposed its own labor policy, much in the same way as it had opposed its conduct to the Government's legalistic pleas for its dissolution.

How about their labor policy? What was it and how was it working at the end of the Great War?

CHAPTER XI

Gary and Labor

A conspicuous phenomenon of the Great War was the use made of the desperate straits in which governments found themselves by advocates of this or that change in the political, social, or industrial structure. In every country those wedded to special reforms or systems watched for moments when they might take advantage of situations to strengthen their particular cause.

American organized labor adopted this venerable political strategy when it set out in 1918 to extend unionism over the country. The particular industry which it chose for attack was the one in which it was the weakest—steel; and the particular section of steel which it chose was the one which was strongest and the one that for seventeen years had consistently held to the policy of

The Oliver Mining Company's visiting nurse, showing a mother how to bathe and dress her baby.

the open shop—the United States Steel Corporation.

The first effective move in the agitation came in June of 1918 when at the convention of the American Federation of Labor held in St. Paul, Minnesota, the following resolution was adopted:

"*Resolved,* That the executive officers of the American Federation of Labor stand instructed to call a conference, during this convention, of delegates of all international unions whose interests are involved in the steel industries, and of all the State Federations and City Central bodies in the steel districts, for the purpose of uniting all these organizations into one mighty drive to organize the steel plants of America."

Organizers went to work in the chief steel centers in August following this meeting. The skilled men in and out of the union were lukewarm. The chief response came from the rank and file—foreigners of little experience in the United States, many of them not speaking English.

The leaders knew by the early summer of 1919 that the movement was not as strong as it must be if they were to succeed, and at the convention of the Federation held in June at Atlantic City, it was decided that the force in the field was altogether inadequate to carry on the work in the vigorous

manner the situation demanded, and President Gompers was requested to secure the assistance of all the international unions affiliated with the American Federation of Labor, whose members were directly or indirectly connected with steel. This was done, a strike committee from twenty-four different organizations being appointed.

Judge Gary's help in the movement was now sought, Mr. Gompers, the president of the Federation, writing him that the American Federation of Labor had decided to bring about a thorough organization of iron and steel and wanted to confer with him. Mr. Tighe, president of the Amalgamated, wrote him. Mr. Foster and Mr. Fitzpatrick, who had been the active men in the movement from the start, sought conferences. It was sound political strategy on their part, for if Judge Gary received them as leaders, as they asked, it was a recognition on his part that they represented the employees of the Corporation and it could not but stimulate organization in the United States Steel plants where it was lagging badly. Corporation officials claimed that there were not over 15 per cent. of the men in unions, which seems probable, as at the height of the movement there was not over 25 per cent. in all the various trade groups in the whole steel industry.

A street at the Calumet Mine before and after improvement.

Judge Gary is no mean politician himself. He realized the boost a conference with him would give the movement and he refused to see the gentlemen who sought him—not as individuals, as he tried to make clear—but as representatives of a movement in which he did not believe and which he had no intention of encouraging directly or indirectly.

What were his reasons? He gave them repeatedly.

"These men are volunteers, outsiders entirely. I don't think our men asked them to represent them. I have no idea they did, because if our men were dissatisfied in any respect we would have heard of it and if we were wrong we would have corrected it. If they had come to me and said, 'We represent 15 per cent. of your men and because we represent 15 per cent. of your men we should like to talk to you about that 15 per cent.,' I am not prepared to say that I would say 'no' to that. But they did not do that.

"This is a movement for a 'closed shop.' We are not willing to do anything which we believe, after consideration, amounts to the establishment of a closed shop as against an open shop, or that tends to do that. We stand firmly on the proposition that industry must be allowed to proceed untrammeled by the dictates of labor unions or any one else except the employer, the employees and the Government."

In the meantime the movement was

getting away from its leaders. From every steel center organizers began to insist that there be action—a strike—some proof that what the men had been promised, or thought they had been promised, was going to happen. In the emergency the leaders used Judge Gary adroitly. They called a strike on September 22, 1919, and the reason Mr. Fitzpatrick gave later was "the refusal on the part of Judge Gary to meet a conference."

But Judge Gary would not budge and he was in better case to hold his position because he thought it certain that the strike could not succeed. Indeed, it had the feel of failure from the start. Mr. Gompers felt this, so did Mr. Tighe, so did all of the experienced labor men in the conservative unions. It was a strike which never fully believed in itself, which was saturated on the inside from the start with suspicion—suspicion of the radical for the conservative; of the conservative for the radical. The members of the committee organized in June to invigorate the movement pulled at cross purposes from the beginning, actuated as they were by their different notions of industrial organization. It was a committee perfectly described by a union official as having the "cohesiveness of a load of furniture."

While the organization of the entire steel industry was a goal of the labor leaders, its chief attack was on the Steel Corporation. Pittsburgh and vicinity was a vital point of this attack; but the strike never had solid footing in that district. True, large bodies stayed away from work in the plants around Pittsburgh in the early days of the trouble—some out of sympathy, some out of fear. There was violence at some points, clashes between strikers, men going to work, and police anxious to keep order, but, in spite of this, the majority soon came back. Organized bodies, like the switchers and the carmen, stayed at their posts. In the third week of the strike, a Senate committee which had promptly undertaken an investigation and which went to the Pittsburgh field, found 9,044 out of a normal force of 11,500 at work at Homestead; 5,370 out of 5,700 at Duquesne; 6,500 out of 7,000 at the Natural Tube Works, McKeesport; 2,600 out of 4,000 at Clairton. Four plants down the Ohio, near Wheeling and Steubenville, were closed on an average for two full months. The plant which suffered most severely in the strike was the Central Furnaces of Cleveland, employing some five or six hundred men. It was out five full months.

The best evidence that there was no deep or general determination among the employees of the Corporation to force organization was the fact that life went on in the steel communities without serious dislocation. Production kept up fairly well, which was the test of management. Order was fairly well maintained, in spite of occasional violence on both sides. All the manifold social and educational activities of the towns went on.

A most conclusive proof that the body of steel workers had not lost confidence in the Corporation is the fact that in this disturbed year of 1919, 61,324 subscribed for steel stock and 46,676 of these were men receiving from $800 to $2,500 a year. The year following, 1920, with the after effects of the strike hanging over the labor body, 66,311 workers subscribed to steel stock.

The effort to unionize failed. In January the strike was called off.

But if the strike was dead one problem it had raised was very much alive. Although the agitation had been started for the purpose of unionization, it became necessary to give to the public reasons why unionization was desirable. This was done in the form of twelve demands—one of which was the eight-hour day. The strikers and their sympathizers declared that Judge Gary's opposition to the unionization of the Corporation's plants came mainly from his determination to preserve a twelve-hour day.

It is possible to say now, though in 1920 there were people who would not listen to the statement, that the Steel Corporation and Judge Gary, its leader, never had anything to do with the arrangement of hours to which so many people in and out of the industry rightfully objected. These hours came into operation years before the Corporation was organized. As a matter of fact, they were practically forced on the steel industry in the 'eighties and 'nineties by workers in opposition to the employers, who were insisting on eight-

hour shifts in the interest of more tonnage.

The proceedings of the Amalgamated Iron, Steel and Tin Workers show that, when the Federation of Labor began its campaign for an eight-hour day, the Amalgamated Council instructed its representatives to take no active part in the propaganda. The Council knew that it dared not run the risk of antagonizing members who had helped put the twelve-hour day into force. Why should they have held to twelve hours?

J. S. Robinson, who has made the only detailed study of the Amalgamated proceedings which has ever been published, says that their objection to the eight-hour day was twofold. "In the first place," explains Mr. Robinson, "earnings are less, since it is not easy to make five heats in eight hours, and it is imperative that the puddler has his heat out by the time the next turn comes on. Secondly, the workman enjoys less freedom under an eight-hour system. The puddler always has been accustomed to arrange for himself the time of starting and quitting. He objects to being hurried in order to produce a 'reasonable output.'"

A third reason, which crops up in the reports of the proceedings, was the fear that the eight-hour shift would bring in new labor, increase the competition in jobs, and there would not be work enough to go around. This fear was so strong that in the early days when three shifts were allowed by the union, it was the understanding that the output of each man should be limited.

These men who had established the twelve-hour day had adjusted their lives to the practise, particularly in the skilled branches of the trade. No twelve-hour man worked continuously; he probably was not employed over two-thirds of the time. Every one who has been much about steel plants has seen men in certain departments playing cards, sleeping, gardening, reading, eating a lunch with wife or children—a whistle blew and every man sprang to his place. Twenty to forty minutes of intensive work followed—then came leisure again. The unskilled twelve-hour man has his rest periods too, as every observer knows, though they are less regular.

But as the steel industry grew, the evils inherent in such long hours became more and more apparent, particularly in congested districts like Pittsburgh and its vicinity. Social workers, pastors of churches, industrial investigators pointed out that the twelve-hour day, with the time consumed in going back and forth from work, left no waking hours for the family, the church, citizenship. It kept men from out-of-door life, self-improvement. It was antisocial, unhealthy, and, as they saw clearly, was arousing in younger men who had no industrial traditions, knew nothing of the origin of the custom, a bitterness which could not safely be disregarded. The campaign against it became so strong that in 1911 Charles M. Cabot of Boston, a steel stockholder who had been much disturbed by the agitation, asked at the annual meeting for a committee which should investigate and report in regard to the twelve-hour day and other charges that had been made against the Corporation's labor policy.

Judge Gary always holds a large majority of proxies and could of course have quashed the resolution at the start, but he told the meeting that he intended to vote for it; and the result was that it was unanimously carried. A year later the committee reported.

They told the stockholders that they had ascertained by an examination of the records of employees that about one-fourth of the whole labor body—25¾ per cent., to be exact—was on a twelve-hour basis. The committee said they were of the opinion that a twelve-hour day of labor, followed continuously by any group of men for any considerable number of years, meant a decreasing of the efficiency and lessening of the vigor and virility of such men.

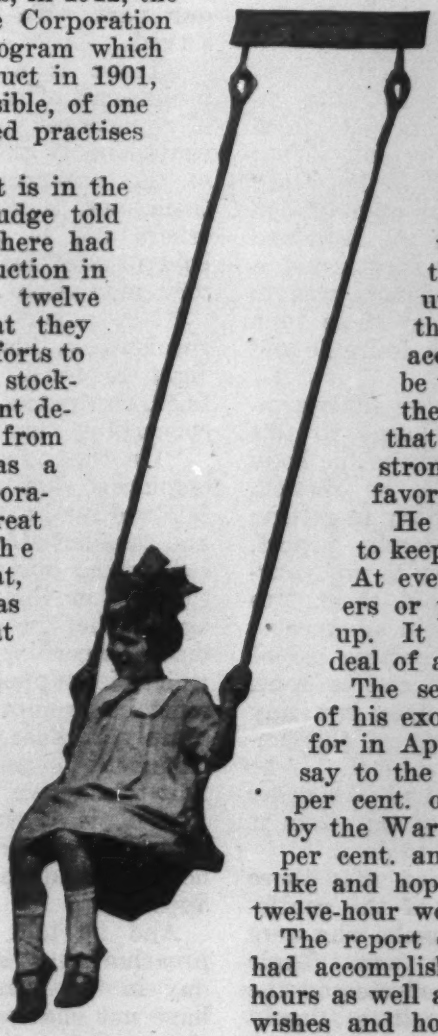
They criticized the social effects particularly and emphasized the necessity of conserving the strength of the working population in order to be assured of a healthy, productive, intelligent citizenship in the future.

"Steps should be taken now," they went on, "that shall have for their purpose and end a reasonable and just arrangement to all concerned of the problems involved in this question. We recommend the matter to the intelligent and thoughtful consideration of the proper officers of the Corporation."

These "proper officers"—the Finance Committee—to leave no room for doubt as to where they stood, promptly approved of the report and appointed a committee to study what, if any, arrangement could be made toward reducing the twelve-hour day, so far as it then existed. That is, in 1912, the governing body of the Corporation added to the labor program which it had begun to construct in 1901, the elimination, if possible, of one of the most firmly fixed practises of the industry.

Two years later, that is in the spring of 1914, the Judge told his stockholders that there had been a 3 per cent. reduction in the numbers working twelve hours a day, and that they were making further efforts to improve conditions. A stockholding employee present declared that he knew from his own experience as a worker that the Corporation was making a great effort to reduce the twelve-hour day, and that, in his judgment, it was about at a minimum at the present time.

This is where matters stood in the spring of 1914. Then came the War with its demand for production—more and still more production. The 22 per cent. of twelve-hour men in the Corporation plants in 1914 became 32 per cent. Then came the demand to unionize—the strike—the renewed attack on the long day. "Judge Gary could put an end to it if he would," men said, "but he will not listen." But they were wrong. As a matter of fact, one of the first labor subjects that Judge Gary took up after the War was how to bring not only the Corporation, of which he was the chief executive officer, but the iron and steel industry, for which ever since 1908 he had been the chosen and respected spokesman, to adopt the eight-hour day. Talking to the Senate committee investigating the steel strike in October of 1919, he said that, for his part, he believed that eight hours were long enough for a man to work out of the twenty-four. He thought there were a good many employers, though by no means a majority, who believed the same thing. "As a matter of policy and principle," he said, "if we can make it practicable to adopt eight hours throughout our works universally, and the men themselves are willing to accept that basis, we would be very glad to adopt it, for the reason, if for no other, that we think there is a strong public sentiment in favor of it."



"Letting the old cat die" in a Steel Corporation playground.

He continued through 1920 to keep the subject to the front. At every meeting of stockholders or presidents he brought it up. It was causing him a great deal of anxiety, he told them.

The seriousness and insistence of his exortations had their effect, for in April, 1922, he was able to say to the stockholders that the 32 per cent. of twelve-hour work left by the War had been reduced to 14 per cent. and he added, "we would like and hope to eliminate all of the twelve-hour work if practicable."

The report of what the Corporation had accomplished in the reduction of hours as well as this statement of their wishes and hopes brought a powerful aid to Judge Gary's real desire to see the practise eliminated, not only in his own body but throughout the industry, for three days after his announcement to his stockholders, he received from the President of the United States a letter, obviously inspired by his announcement. In this letter President Harding said:

"I do not know whether the rumor is well founded, but the story comes to me that you are contemplating the discontinuance of the twelve-hour day in the steel plants and the substitution of

the eight-hour shift. If you really have this important change in mind I would be perfectly willing, if it seems desirable, to lend any consistent assistance in securing the acceptance of the same principle in other large establishments."

My own judgment is that nothing could have pleased the Judge better. He acted on the suggestion immediately, saw the President and suggested a meeting with leaders in the iron and steel industry. President Harding immediately arranged a dinner at which some forty or fifty were present. What happened at this dinner Judge Gary reported a week later in an open session of the annual meeting of the Iron and Steel Institute, when he appointed a committee whose real business was to convert the industry as a whole to a belief that the change was desirable and practicable.

There was no evasion or lukewarmness in Judge Gary's charge to this committee, and particularly to the body of iron and steel men who, he insisted, should share its responsibility in getting facts and adopting a worthy report. "Here is your opportunity to put yourselves on record," he told them, "to show your determination in advance to find ways and means of getting rid of the twelve-hour day, if it can be done. It depends a great deal upon how any one considering a question of this importance approaches the subject. If he is trying to find a way not to do a thing he is more apt to find that way than if he is disposed in advance to do it."

It can hardly be denied that there was perhaps a majority of the gentlemen to whom the Judge spoke who were not disposed to find a way. Their influence was certainly reflected in the report which the committee finally brought in. It was not a final report—Judge Gary took care that that was made clear at the start—but it was not an encouraging report to those who hoped the industry as a whole would go vigorously at the question.

The report was bitterly criticized and the criticism centered on Judge Gary. How did he take it? Well, I think as good a proof of the kind of leader that he is, as can be found in a man's words—and practise and words go unusually well together in Judge Gary's case—is what he said to the presidents of the subsidiaries only two weeks later.

The criticisms had been based, as a rule, he said, upon misrepresentation or misapprehension, some of the severest coming from those who evidently had never read the report. "These unjustified criticisms," he said, "naturally provoke a feeling of deep resentment on our part. We think they are undeserved.

"There is a possibility that some, perhaps all of us, may carry our feeling of resentment too far and thus become unreasonably antagonistic towards some of the criticisms or those who make them, and thereby do an injustice to others and to ourselves; and I make bold to offer for consideration conciliatory suggestions.

"Newspapers, magazines, public speakers, in fact all persons have the right to form, and, if done in good faith, to express, unfavorable judgment concerning the conduct of our affairs.

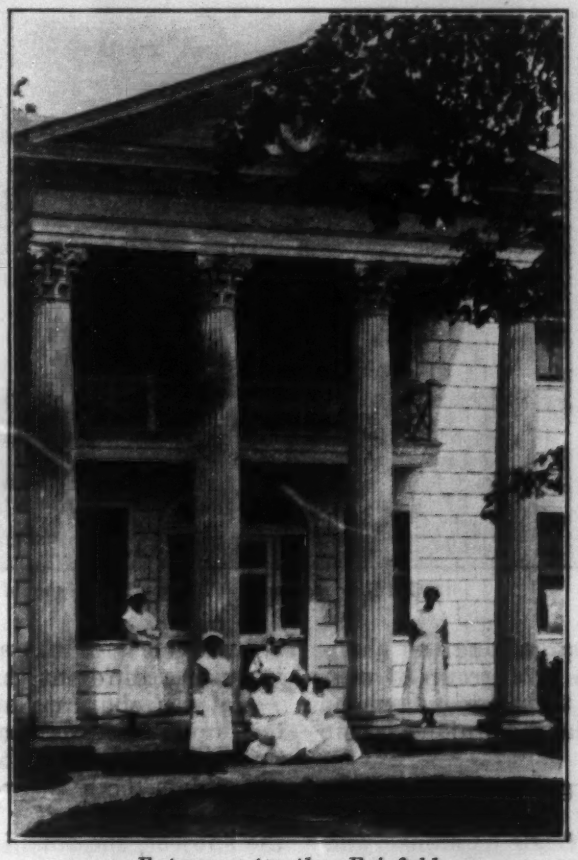
"On this occasion I would urge and emphasize that on our part we must be fair and reasonable; that we should read and consider all criticisms that are made concerning our Corporation or its subsidiaries or their management or managers; that in so far as complaint is made concerning our attitude or action, which is supported by the facts, we must be prompt to adopt a corrective. Simply because we believe a part of a statement is unsupported by facts or that the motive for the whole or a portion of it is unworthy, we must not reject or ignore anything which in honesty and propriety requires our approval."

And he told them after this little preachment: "As to the twelve-hour day in the iron and steel industry, I have not changed my mind, long since expressed. I think it should be completely abolished. My views are shared by our Board of Directors, our Finance Committee and our presidents, therefore it is expected you will continue your efforts in good faith and vigorously to effect a total elimination."

By this time the President seems to have read the report, which his first comments show that he had not done, and to have found the loophole; and, at the suggestion of his Secretary of Commerce, Herbert Hoover, who had engineered the negotiations as well as sug-

gested them, he took advantage of it.

"I am impressed," he said, "that in the reasoning of the report great weight should be attached to the fact that in the present shortage of labor it would cripple our entire prosperity if the change were abruptly made. In the hope that this question could be disposed of, I am wondering if it would not be possible for the steel industry to consider giving an undertaking that before there shall be any reduction in the staff or employees of the industry through any recession of demand for steel products, or at any time when there is a surplus of labor available, that then the change should be made from the two shifts to the three-shift basis."



Entrance to the Fairfield, Alabama, company hospital.

When one follows Judge Gary's leadership in all the various matters he has been called to direct, one realizes that he has a sure sense of the moment when the "mental column" he has been handling can be closed up. He believed that the moment had come now to bring the iron and steel industry as a whole to make a definite and positive pledge, that no one could mistake, in regard to the twelve-hour day. "I will immediately call a meeting of our committee," he wrote the President. And this he did, and ten days later was able to announce, "We are determined to exert every effort at our command to secure in the iron and steel industry in this country a total abolition of the twelve-hour day at the earliest time practical—without an unjustifiable interruption to operations. The change cannot be effected overnight. It will involve many adjustments, some of them complicated and difficult, but we think it can be brought about without undue delay when, as you stated, there is a surplus of labor available." The men signing this decision represented about 75 per cent. of the whole iron and steel industry.

There were difficulties and delays, but by September the Corporation at least had done away with the 10 or 12 per cent. of twelve-hour labor which remained at the time the pledge was given, but for elimination of which we have repeated documentary evidence that Judge Gary had long been working. It is indeed very doubtful whether the President himself could have secured the final pledge that he did from the industry if it had not been for Judge Gary's leadership. Secretary of Commerce Hoover, through whose courtesy I have been able to examine all of the departmental correspondence in the matter, says that Judge Gary, "through his leadership and cooperation, made the largest contribution possible to the final solution of the twelve-hour day problem in the steel industry"—a comment which he permits me to quote.

A second serious charge against the labor policy of the Steel Corporation which the strike left in the public mind was that it "suppressed labor," had no

Outdoor pageant, Chickesaw Shipbuilding & Car Company.

form of collective bargaining, no channel by which a man or a group of men could make known to the management their grievances, their opinions, their criticisms.

Two ways of bargaining collectively were recognized by the public at the moment—through trade unions and through company unions. The Federation of Labor refused to admit the adequacy of the latter and included in its strike-demands their entire abolishment.

Judge Gary gave his notions on the point to the Senate committee investigating the steel strike:

"I think labor ought to be encouraged to deal collectively, and it ought not to be prohibited at any time from dealing collectively; but dealing collectively in the form of committees, or however they themselves may decide, is one thing, and dealing collectively as insisted upon by the labor leaders which means that the union labor leaders shall decide all these questions, and shall represent the men, whether they are asked to or not, and will establish a basis for the closed shop which would shut out the individual voices of these men practically, is quite a different thing."

He was obdurate about trade-unions but open-minded about the company union. One of the best collections of pamphlets, both theoretical and practical, which the writer has ever seen on the subject, she found on Judge Gary's table when she was one of the stream which flowed into his office to ask why in the world he was not seeing Mr. Foster and Mr. Fitzpatrick. "Much consideration of late has been given to the subject of shop committees," he told his stockholders in April, 1920. "We have made diligent investigation of these matters, and up to date we think no plan better, or more satisfactory to employees, than our own has been tried.

"But," declared his critics, "the Corporation has no plan. There is no way for the man at the bottom—the man that we are interested in—to get the ear of the governing body." Judge Gary thought differently. He declared that any employee or any self-appointed group of employees, could make their

This is a part of the Steel Corporation holdings.

wishes known at any time to the authorities, even to the top of the organization. Now, what is this plan in which Judge Gary believes? Is it really a plan? A thing of which you can make a blue print?—the ability to make a blue print of a policy being the test of its virtue in the minds of many people.

Begin at the bottom and work up. The unskilled workers in the Steel Corporation are organized for the most part into gangs, at the head of each being what is called a "straw boss."

The immediate superior officer of the gang is a foreman. If these men wish to bargain, complain, ask a change, they go to their foreman. And right here, the critics declare, the Corporation's plan—which of course is the oldest in industry—breaks down—one never gets by the foreman.

How about this? Thirteen years ago, an employee stockholder, who had come to a meeting in New York as the elected representative of a large body of stockholding workers, pointed out several improvements in the condition of labor which he claimed had been brought about by the Corporation. "The foremen are not abusive to men like they used to be in former days," he said, "the officials *won't stand for it.*"

In certain of the subsidiaries grievance committees exist. For example, in the Tennessee Coal, Iron and Railroad Company and the Oliver Iron Mining Company there is a so-called "Mutuality Committee." It is made up of from three to five men who are changed from month to month so that every man can get a chance. This committee is supposed to keep in close touch with the men. Any complaint which they consider legitimate they take to a foreman. If they do not get from him what they call fair treatment, they go to the superintendent. If he does not satisfy them, a hearing is held, a real hearing before the head of the employment bureau. If the decision at the trial is not satisfactory, then the Mutuality Committee can take it up to the president. "The men have been so fair in these trials," the head of the employment bureau of the T. C. and I. says, "the committees have been so serious

about their work that foremen and superintendents have come to be very careful about refusing anything that is brought to them by a Mutuality Committee."

In some of the plants, notably the American Steel and Wire Company, there have been in operation for some time training courses for foremen, devised by the educational department of the plant itself. At the National Tube Works, courses have been established for which a fee is charged, and there are always more men seeking admitance than directors have been able to accommodate.

It must not be forgotten that for fifteen years or more employees of the Steel Corporation have had a continuous representation in safety committees. These committees, on which probably at the present writing fully ten thousand men are serving, were originally appointed to cooperate with the management in developing and executing safety and sanitation measures. The members rotate in order to give the largest number possible an opportunity for service. Naturally all the grievances of a shop are known to this committee. They find expression there, and more and more the safety committees of plants have become, in practise at least, more or less effective channels of expression. It is doubtful indeed if there are many company unions in which there is more real expression of complaints and ambitions.

This form of organization deals more intelligently with labor because from top to bottom the great majority of the executives concerned have come from the bottom and know the life and needs from experience. Advancement through proved ability is a rule of the Corporation. Foremen are made from "straw bosses" just as assistant superintendents are chosen from foremen, superintendents from assistant superintendents and presidents from superintendents.

Go through a steel plant and ask how this or that executive came into his position. Almost invariably it will be a story of a rise from office boy, water boy, or the labor gang. President Schiller of the National Tube Company started in as an office boy; the present president of the Corporation, Mr. Farrell, as a day laborer. One often hears an old steel worker say, "Look at Jim Farrell. See what he has done. I knew him when he was drawing wire." These advancements, it is to be remembered, are not by accident or chance, but by a carefully supervised system based on merit. They are an everyday proof to men that a share in management is open to them, waiting for them, if they prove their willingness and ability to take it.

But, it is objected, there is no system of bargaining in regard to wages—at least nothing comparable to the making of scales through the union. A grievance about wages is handled in the same way that a grievance about any other matter is, that is, a man or a group of men go to the superintendent with their request. As long, however, as the established policy of the Corporation in regard to wages is to keep them a little ahead of those paid by competitors, to raise them without request, and never to reduce them unless conditions make it obviously imperative—so imperative that the men themselves understand it—there is little chance of dissatisfaction on this score. It should not be overlooked that the Steel Corporation, through its stock subscription scheme, to which the men subscribe yearly in large numbers, gives a basis for considering the fairness of wages which practically no other organization in the country gives, and which the union ununfortunately does not often have in making its claims.

Last year (1924) over 61,000 men took stock in the Steel Corporation. Now, to each of these went a copy of the annual report analyzing the business. Stockholders, who went in at the start and have held their stock, have data telling how the Corporation has used its money since the beginning, how it has built up its capital, provided for future obligations, what it costs to enlarge, to replace, to keep up to the times. They see there what the production of iron ore and steel ingots and finished steel costs per man. They have the total net earnings before them and how they are used. They can see, too, that the average wage has been steadily upward, and they know, if they are holders of common stock, that when it has been a choice between cutting their wages and cutting dividends it has been the latter that have suffered. Now, while there is no doubt that many men do not study these reports, there

Judge Gary at the entrance to his Long Island home.

are at the same time many that do study them and discuss them in mines and mills and plants and homes all over the country. They are as good textbooks in the conduct of financial corporations as the country affords.

This is *their* business which the report analyzes, the one which pays their wages and in which they have invested savings. It *reports* to them. They have the right to go to stockholders' meetings and make any remarks they please. Partnership, cooperation is offered them instead of collective bargaining through the union.

The intelligent and persistent effort the Corporation makes to regularize and stabilize employment is not lost on the men. "It is better to keep men on pay rolls than on relief and jail rolls," is a dictum Judge Gary laid down years ago and every subsidiary has its own way of following the council. Mountains of ore are piled up in dull times, yards are filled with iron and steel ingots, plants are repaired and extended, new ones are built. The men know these are efforts to protect their jobs and their stock. For illustration, the Minnesota Steel Company began, after the War, in a period of depression, to build a wire plant. The construction gang was made up largely of men from closed mills. When the new plant was finished, twenty-five specialists were brought in to help start it. Practically every man who had worked on its construction, who did not go back to his old job when his mill started again, went to work in the wire mill. When running full it employs 572 men, and there are only three wire drawers who did not learn the business there! One valuable feature of this policy of developing the labor at hand, whatever its experience, is that is often opens the way for the unskilled man at the bottom, a man for whom, as a rule, the skilled worker has no thought, whose competition he fears and whose training he often hinders, in the same way as the earlier trust builders feared and hindered the operations of smaller competitors.

Many, indeed one may say almost all, of the activities of the steel plants depend for success on the cooperation of management and workers; safety, sanitation, community life would be impossible if there was not a natural and interested response from the men. They serve regularly on committees in the towns as in the plants. The Corporation has been trying for years to make the steel communities desirable places in which to live; they succeed in proportion to the response of the workers.

It is not a simple problem. Many of the plants which the Corporation acquired, such as Homestead and those at Duquesne and McKeesport, were in established communities where the worker must depend upon the municipality for social life and the education of his children, and he must rent or build a house as workers in other industries of the town were obliged to do. There are ten thousand employees at Homestead, and the Corporation never owned more

than four hundred houses there. As a rule, however, the steel town must be built by the Corporation. Mines are opened where ore or coal is found. Wild land must be developed if a great new plant like Gary is to be established. Thus community building becomes a part of the Corporation's work. It has some $90,000,000 invested in houses, and since 1920 it has been loaning money to employees for buying or building. Some $8,000,000 has been loaned in this period, and I have had presidents of subsidiaries tell me that there has been no pressure from the men stronger than that for the Corporation's help in buying a home. Under this scheme a man can buy or build, in or out of the limits of the steel community. All of the comparatively few Homestead houses have been bought under this plan. Not a few men prefer to go where they can acquire larger tracts of land, depending upon their cars to take them back and forth. So common is the practise that it has been found necessary to establish in the yards of all the big plants extensive garages for workers' cars.

Great pains have been taken in remodeling the old communities, as in the towns of the Frick Coke and Coal Company near Pittsburgh; and in old as in new towns, a consistent and intelligent effort is made to provide decent, comfortable and attractive living places where the workers will have satisfactory opportunities for the education of their children and for social life—places where they can feel and act like citizens.

One member of a Steel Corporation class in home economics.

The towns of different companies differ because, as Mr. Crawford of the T. C. and I. says, each is the individual attempt of the management to translate Judge Gary's notions of what the American worker ought to have. Mr. Crawford's own translation was made in a community where the original native labor body was indolent, untrained, unreliable, and where there was no initial desire for regular employment, for schools or for decent orderly living.

It was seventeen years ago that the Steel Corporation bought the T. C. and I. The labor problem at the start was difficult beyond belief. All the traditions were bad. Negro convicts farmed out by the state of Alabama had for years worked in the mines. The company stores were a scandal, swindling the workers and corrupting wholesale merchants, purchasing agents, politicians, and not infrequently labor leaders—all of whom found in these stores the only lucrative graft which Birmingham offered at that date. There were no decent houses, no decent schools. The air was full of mosquitoes in summer and of influenza germs in winter. It was a terrible position for a man who had a complicated metallurgical and developing problem thrust upon him and who needed steady, trustworthy labor if he was to succeed.

In the last seventeen years Mr. Crawford has transformed the situation. Take housing—one of our best authorities—a man whose knowledge of industrial towns and housing experiments included all that has been done in Europe as well as this country—Dr. F. L. Hoffman of the Prudential Life Insurance Company of America, wrote to Mr. Close, after an extended examination in 1918 of the twenty or more T. C. and I towns:

"The work of your company in the Birmingham district is one of the most remarkable contributions to the ultimate solution of the labor problem of which I have knowledge. That problem, as I conceive it, involves no more and no less than the whole question of contentment, or absence of friction, on the part of the employee with any and all conditions giving unnecessary occasion for irritation, discomfort, etc. Now, of all that concerns laborers, there is nothing as vital as the houses in which they live,

and the surroundings that go with them, and the conditions of family life that depend upon them. Your company, under your direction, has taken hold of this question with a thoroughness rarely met with in this country. . . . It is obvious that you are aiming at a provision for home life rather than for mere housing, and that is, after all, the most vital distinction to be made in matters of this kind. . . .

"What pleased us most, however, was the fact that your company disregards racial lines, and aims in its home and housing provisions to provide the same comforts and surroundings for the negroes as for the whites. . . . Nothing has hindered the negro as much as the deliberate policy on the part of the whites to provide him continuously with housing accommodations frequently unworthy of the name. While some progress has been made from the one-room cabin to two or more rooms, your company is the first, to my knowledge, which is providing a real home life, on equality with the conditions under which the best white element lives, for those of the colored race."

In a girls' club room.

One of the finest achievements in the T. C. and I.'s group of fine achievements is what has been done for the health of the community. The director, Dr. Noland, whom Mr. Crawford brought from the health department of the Panama Canal, where he had been working for a number of years under General Gorgas, found conditions in and around the plants and mines about as bad as they could be. To-day there are few, if any, healthier industrial communities in the world. And the whole remarkable organization is capped by a model Employees' Hospital, which in design, equipment, location, medical staff, and nurses' training schools is as good as can be found in the United States.

This noble institution gives to black and white, each of which has, under one roof, its own quarters, exactly the same food, care, physical surroundings. Judge Gary himself has given the highest endorsement possible to the Employees' Hospital of the T. C. and I. by going there himself for treatment and rest. Under the same roof with him, though out of his hearing, negro and white mothers bear their babies, negro and white workers are treated for burns and broken bones, negro and white children are nursed through measles and mumps.

The final test of a labor policy must be its power to hold men. Orthodox or not, deficient or not in modern industrial dogma, formulas, and terminology, the labor policies of the Steel Corporation work—they hold a substantial body of men, hold them through thick and thin as the strike of 1919 proved. These men are not fools. "It amounts practically to a slander of the workmen," said one of them a few years ago, "to give out the impression before the public that they don't appreciate these things." They judge a policy by actual results—the union itself has been their teacher in this—and when they see that, their wages are a little better than in most of the plants of their kind about them, that efforts go on year in and year out to regularize and stabilize their jobs; when they see the opportunity given them not only to become stockholders with the privileges of the stockholders, but that money is loaned them on easy terms to buy homes wherever they wish, in or out of the Corporation communities; when they find their children getting opportunities for education and health which they have believed beyond the reach of the great mass of men; when they see men, who have worked beside them up to sixty-five, able to retire on pensions which help keep them in modest comfort for the rest of their lives; and when they know this is all

done in no spirit of paternalism or charity but as a business proposition, they are willing to do their part to make it a success. They have common sense enough to see that a demonstration of what can be done profitably by a corporation should be of substantial value in working out the immensely difficult labor problem. They know that their corporation is a factor in this, and many of them have no doubt come to believe that they are doing as much for the ultimate solution of the labor problem by giving their cooperation as they would be doing by warring for a particular form of labor organization.

CHAPTER XII

Gary—Industrial Leader

The abandonment of the twelve-hour day in the steel industry ended an anxiety which Judge Gary had been carrying for more than a dozen years. Another long continued anxiety which had been ended by this time was that over the outcome of the Government's suit against the Steel Corporation.

But if the Government had won, had ordered a dissolution, what would Judge Gary have done? I asked him once. "I had in mind a plan," he replied. "I might have said to the government, 'We propose that you consent to dividing the Corporation into two distinct companies, each having every line of business, fully integrated and full diversified: one—the Federal Steel—handling the West and Middle West territory; the other—the Carnegie Steel Company—handling the East.' This would have accomplished the Government's purpose and would have been the least possible shock to business and to the foreign trade, and would have protected investors."

There was a strong feeling in the country that the Steel Corporation was making more money than was possible if all its practises were fair. The question of profits came in for severe criticism after the War; and both inside and outside of the Corporation there were examinations, and explanations of the whole financial history and situation. The findings are of course important in any review of Judge Gary's business life, since they are so largely the result of the application of his business theories and ethics. It was proper that the War earnings of the Corporation should be studied by the Government. It was necessary in order to meet the rather persistent charge of profiteering as well as to give the Government a base for the handling of private industries in case of another like catastrophe.

Many of the charges of profiteering were highly fantastic, and those who made them overlooked the fact that the prices charged by the steel industry were fixed by the Government itself. These prices were more advantageous for the Corporation, of course, than they were for nonintegrated, nondiversified concerns. It was necessary, however, that such concerns should be allowed to make money enough to keep them going; their product was needed. The Government proposed to offset by high taxes the profits which the great steel companies made through the prices they fixed. There were periods of the War when the federal taxes on the Steel Corporation were a million dollars a day, which was not too much, considering what it was earning.

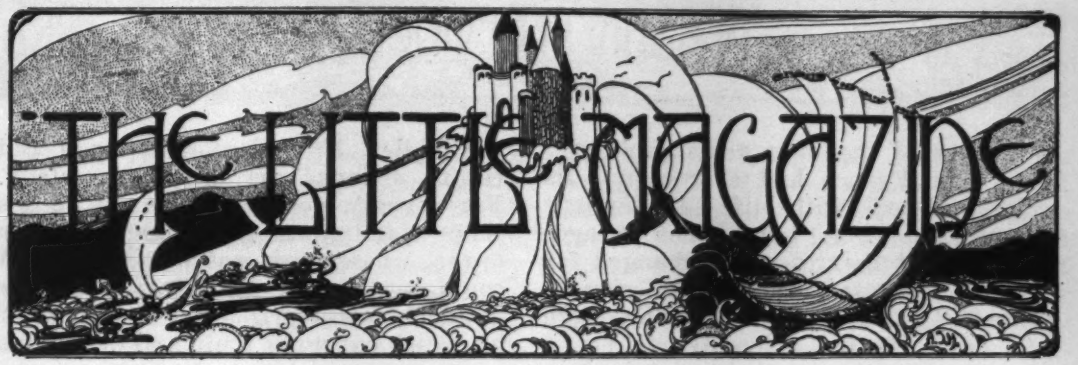
The investigation of the War profits and costs in the steel industry was carried on by the Federal Trade Commission.

The period looked into was from 1915 to 1918, and it estimated the earnings of the Corporation at 18.2 per per cent. *before* federal taxes were paid. This was less by 2 per cent. than the average earnings in the industry as a whole.

Judge Gary set his foot firmly down on what he called "unreasonable profits." War was not an excuse, in his judgment for letting its bottom drop out.

It was not until the fall of 1917, as we have already seen, that the Government agencies and the steel industry came to an agreement on the prices for steel products—prices which were considerably lower than those that Judge Gary had considered reasonable be-

(*Continued on page* 474)



CRAFTSMEN WHOSE WORK WILL LIVE

By STEUART M. EMERY

IS there anything more beautiful than the magical richness of a Gobelin tapestry, the shining grace of a Stradivarius violin, the brilliance of a bit of Palissy pottery or the charm of a plate of Wedgwood ware? Despite the passage of the centuries that have elapsed since such master craftsmen lived and toiled and gave of themselves for their calling the luster of their names has remained undimmed—connoisseurs in the realm of real art are willing to pay untold sums for samples of the work into which they put their hearts.

The spirit that breathed in them has passed forever from the workshop and the bench. There is no more furniture such as Sheraton and Chippendale and Hepplewhite turned out. Gone is the fine flame of inspiration that produced the bronze shrine of Saint Sebald in old Nuremburg—the masterpiece of Peter Vischer. The wood carvings of Grinling Gibbons cannot be duplicated to-day, though they made of London, building itself anew after the great fire, a city of beauty and charm. Lathes that are run by machinery, great factories whose employees keep union hours—in a word, the influence of mass production over that of the individual—have banished forever the charm of wares that were made for the love of the making and not for the profit that might lie therein.

They were the creations of genius made only too often at the cost of hardship and want. At other times they brought to their makers both wealth and fame. Go back through the years to the days when Palissy the potter labored over his task of constructing wares that would be the concrete examples of his dreams. Somewhere in the smiling south of France he was born about the year 1510. At some period in his youth the vision came to him of doing great and beautiful things. And so he gave up his trade of painting on glass to become a wanderer over the face of France and Germany. He wanted a wider contact with his fellow men—he wanted the broad outlook on life that only travel could give him. When he was penniless he painted the portraits of any one who would sit for him, and he did them well.

It was after his marriage, when he was living at Saintes, that the most stirring dream of all came to him. A majolica vase, imported from Italy, was placed in his hands and Palissy knew then that the real purpose of his life had been disclosed to him. He must find out the secret of this vivid new enamel pottery at no matter what cost in toil and fatigue. He set to work in the face of ridicule and upbraidings. He went ragged and his family went hungry for no less than sixteen years—he even used to tear up the flooring of his cottage and the furniture of his rooms in order that there might be wood with which to stoke the fire of his furnace. Then there arrived the day when from this humble furnace was pouring

a stream of the most remarkable pottery that France had ever seen. Its colors blazed with life—an artist's dream had come true. The meager workshop at Saintes was exchanged for a great laboratory in the Tuileries itself—the tattered working clothes were put aside for the splendid garb of a famous man who was being received at court.

But religious tyranny was abroad in those untutored times. Saint Bartholomew's Eve saw the streets of Paris aflame with massacre. Palissy was spared, but not for long, as the wave of intolerance carried him into the Bastille where, as a Protestant, he was imprisoned for four long years. The king himself visited him in his narrow cell and begged him to change his faith. Palissy the potter, who had sacrificed the best years of his life for an ideal, was not to be swayed from any convictions that had been born in him. He refused to hear the king and death came to him while the fetters of the Bastille were still upon his wrists.

What Palissy did for the pottery of France the Gobelins, in the previous century, had done for its tapestries. For years the hard-headed Parisians passing the door of a certain tiny workshop in the Faubourg Marcel were accustomed to shrug their shoulders and derisively murmur something about "that fool Gobelin and his folly." What idiocy to believe that here in France there might be made such colors as those which the Italian craftsmen alone knew how to achieve! That man must be mad! They themselves were mad—absolutely mad—about Gobelin's works before he was through. Great castle walls were brilliant with tapestries of the Gobelins—a gray and colorless century had suddenly blazed into light. Fortune poured in upon the craftsmen and one of them was made a marquis.

There was to dawn upon the world a still greater marvel of the craftsman's art—a violin whose tones and beauty remain untarnished to the present day. Stradivari was born in Cremona and sent the name of that city ringing down through the ages as the birthplace of the fiddle. From inanimate wood and catgut strings rose deathless melody. For seventy years he wrought in his shop—a tall gaunt craftsman in a white apron, whose work was his life. "God could not make Stradivari's violins without Stradivari," was a phrase of his which expresses truly and deeply his attitude toward his creations.

And wonderful creations they were—these Stradivari violins which are as perfect to-day as they left the workshop in Cremona. Red and gold glows upon the wood of them, ebony and ivory in glorious designs are inlaid in their frames and on their cases. The making of violins was Stradivari's religion. From all the great cities of Italy flocked the nobles to buy his fiddles, yet, strangely enough, the England of his day held aloof. It is told that at one time he shipped to London a consignment of his priceless violins to be sold as low as four pounds apiece and that they were returned to him.

There are instances innumerable of great works of art which could not win recognition in their own day. For thirteen years Peter Vischer, the great worker in bronze, toiled upon the shrine of Saint Sebald in Nuremburg—lavishing the love and skill of a master artist upon its coffer and canopy and figures. When it was finished the seventy-year-old craftsman received for his labors the merest of pittances. But, in compensation, the glory of the centuries was to attach itself to his name.

There was the day, too, when young Grinling Gibbons brought from Deptford to London a wood-carving of the Crucifixion by Tintoretto. Its figures were living things, its framework of carved flowers was a vision of grace. Before the Queen Gibbons placed his masterpiece—there were a few sneering remarks from an idle hanger-on and the Queen shook her head. Another artist's dream had faded into dust. It was not until Gibbons's great friend and counselor—John Evelyn the diarist—had persuaded Sir Christopher Wren of his protegé's genius that Gibbons came into his own. The decorations of the choir in vast St. Paul's were his—the

fire of 1666 roared down the city's streets and when the rebuilding of the shattered town commenced the panelings and clock-cases and carvings of Grinling Gibbons were in almost every house and church of consequence.

There is a touching story of loyalty connected with one of the works of Gibbons. He was commissioned, it seems, to fashion out of marble the pedestal for a statue of Charles Stuart, the monarch of England of his day. He inquired who might be paying for the work and discovered that it was an aged backstairs page, a simple and ignorant but thrifty soul, who wished to advance the thousand pounds that it would cost to glorify his master's memory.

Scorned though he might have been on his first appearance at the Court of Charles the Second there was another court which visited upon Gibbons the highest honor it could give a craftsman and artist. At the time of his death Gibbons had been for a number of years the master-carver of George the First.

It may not be a new thing to-day to hear of a factory owner who lays out towns and habitations for his employees, but all England was stirred when it learned of the amazing work of Josiah Wedgwood along this line. He had started life as a poor potter's son —he gave to his native land china and porcelain of its own. No longer were the wares of Delft and the Far East sought after by decorators and owners of homes. Wedgwood made the plates and dishes which changed all this completely.

At the age of eleven he was forced to make his own living as best he could. Misfortune struck at him from the start in the shape of a growth which made necessary the amputation of his left leg. There were years when he labored, ununknown and unsung, in a tiny cottage in the countryside — experimenting, testing always for a new ware which could compete with those brought in from abroad. He found it, and England was given a new industry. The great Wedgwood potteries rose with a ten-mile road running through them —nearby were the neat and comfortable homes that Wedgwood built for his workpeople. He was a man who would allow nothing but the best to issue from the works bearing his name—he would smash with his own hands any piece of pottery which seemed to him to be below his standard. The floor of his factories at times were littered with the fragments of the wares that he had destroyed during a visit of inspection. In those days a craftsman was a craftsman.

The Gobelins for dyes and tapestry, Palissy for pottery, Gibbons for woodcarving, Wedgwood for china—those names will endure. But there is another to be added to them—that of Chippendale, the craftsman who made a furniture workshop the rendezvous of the fashionable world of the day. So many persons high in court and literary circles came to see Chippendale engaged in making a work of art out of a few ordinary pieces of wood that Sir James Thornhill, the portrait painter, set up his studio on the premises. Sir Joshua Reynolds used to stand among the chips and sawdust of the workshop, chatting with the busy Chippendale. Hogarth and Garrick and Goldsmith would drop in for a word or two of gossip with the man who was creating a new era in furniture.

Chippendale had bridged the gap between the carpenter and the artist. Inlay work, carving, painting—all were perfection in his chairs and cabinets. That was a period of elaborate costumes —the engravings of Hogarth have handed down faithful pictures of gentlemen gallant in embroidery and lace whose waistcoats and coats were marvelous creations of the tailor's skill. It was, however, not so simple a thing for a gentleman to dispose of his coattails when he sat down to carry on entertaining talk with the belle of his fancy. It remained for Thomas Sheraton, who followed Chippendale as the great furniture craftsman, to invent a type of chair which, to the suitors of the present day, might seem odd indeed, but which was a blessing to the gallants of the eighteenth century. Sheraton produced his famous "conversation chair," built so that one sat astride its

seat and rested the arms on a flat top which surmounted a low back. The beaus of the period pronounced them the greatest discovery of all time. They sat upon them and let their gorgeous coattails hang down behind!

There were other finished works which Sheraton produced, although he is better known for his work with chairs. There were pulpits and dressing tables, sideboards and stands for tea services. He taught drawing at one time and was the author of a book on religion. His books of designs became famous. Yet somehow he did not seem to be able to save the money which came in to him and he died a comparatively poor man.

While Chippendale and Sheraton were revolutionizing the craftsmanship of furniture there was an architect at work transforming the structure of London's houses from that of feudal fortification and darkness into light and charm. Robert Adam, who was born in Kirkaldy, Scotland, in 1728, returned to England after years of study in Italy. The classic beauty of the ancient Greeks and Romans had entered into his soul during his stay on the banks of the Tiber—he saw in all their baronial ugliness the unlivable houses that lined the streets of London town. When he and his brothers had completed their best known work—the Adelphi in the Strand—an era of brightness had dawned in architecture. They were the pioneers whose light had led the way.

THE BREATH OF LIFE

The gift of life was given me,
More wonderful than earth or sea,
Than cloud or star of changing skies
Where night and day resplendent rise —
The gift of life.

A thousand colors flash and glow,
A thousand odors waft and blow;
Or harsh or soft or crystal clear,
A thousand notes sound far and near —
The gift of life.

To work, to sleep, to work again,
Rejoice and laugh and suffer pain
Is mine: to know in bliss or ruth
The splendor of the real truth —
The gift of life.

Although that time at last must come
When all sweeps past me blank and dumb
And I untouched as shard or stone;
Perhaps forever — yet I've known
The gift of life.

— *Edith Wyatt.*

ODE

We are the music makers,
And we are the dreamers of dreams,
Wandering by lone sea-breakers,
And sitting by desolate streams;
World-losers and world-forsakers,
On whom the pale moon gleams:
Yet we are the movers and shakers
Of the world for ever, it seems.

With wonderful deathless ditties
We build up the world's great cities,
And out of a fabulous story
We fashion an empire's glory:
One man, with a dream, at pleasure,
Shall go forth and conquer a crown;
And three with a new song's measure
Can trample a kingdom down.

. . . . . .

A breath of our inspiration
Is the life of each generation;
A wondrous thing of our dreaming
Unearthly, impossible seeming —
The soldier, the king, and the peasant
Are working together in one,
Till our dream shall become their present,
And their work in the world be done.

. . . . . .

But we, with our dreaming and singing,
Ceaseless and sorrowless we;
The glory about us clinging
Of the glorious futures we see,
Our souls with high music ringing:
O men! it must ever be
That we dwell, in our dreaming and singing,
A little apart from ye.

. . . . . .

Great hail! we cry to the comers
From the dazzling unknown shore;
Bring us hither your sun and your summers,
And renew our world as of yore;
You shall teach us your song's new members,
And things that we dreamed not before:
Yea, in spite of a dreamer who slumbers,
And a singer who sings no more.

—*Arthur William Edgar O'Shaughnessy*

THE PRAYING MANTIS

By WILLIAM ATHERTON DU PUY

It is a small book with a textbook cover, entitled *Our Insect Friends and Foes.* But, though one may pick it up listlessly, this book is hard to put down again, such is the fascination of its pages. Between its covers is a whole new world—a world peopled by Mayflies, grasshoppers, cicadas, ants, silkworms, milkweed butterflies and many other tiny creatures. Some of them mean life to man; others bring him misery and even death.

The author of this interesting book is William Atherton Du Puy, formerly connected, in an editorial capacity, with the International Labor Office of the League of Nations at Geneva. In writing it he has consulted with Dr. Leland O. Howard, Chief of the Bureau of Entomology of the U. S. Department of Agriculture. With his staff Dr. Howard has gone over the material carefully and has set the seal of his authority upon the whole by writing the introduction.

"Insects are the most powerful rivals of and enemies of man," writes Dr. Howard. "They outnumber all the other kinds of animal life; they outnumber all flowering plants. . . . They carry disease to man; they daily threaten his life; they shorten his food supplies, both in his crops and while they are growing . . . they injure his meat animals; they destroy his clothing; they mine his houses; they disturb his sleep; they injure him in countless ways."

The author's telling, though simple and direct, is entertaining. Every page of the book is packed with information. It is a book for parents and teachers to read aloud to children, and for the children to read to themselves. But the book is not for children only; their elders who begin the first page will wish to read it straight through to the very last paragraph. The story of the praying mantis is one of the most interesting ones. *Editor's Note.*

PERHAPS you would like to know what is the real character of this insect which appears to be the most pious of all its kind, this creature of the leaves that now lifts its arms in benediction as does the preacher at the end of his sermon, and now bows itself upon its knees as though in prayer.

Its very name, mantis, means diviner, or fortune-teller. The English call it a soothsayer, and old-fashioned people over there believe that its long finger will point the way home to a lost child. In France young women go to the crossroads and ask the mantis from which way their lovers will come.

To the Hottentots, in Africa, these insects are gods. The Turks regard them as fellow worshippers. The negroes in our Southern States call them mule-killers, believing that their "molasses" will cause the death of work animals, but also that they can detect the presence of angels. They are also called devil-horses, rear-horses, camel crickets. They are creatures of mystery, reverence, fear. They are meek, slow-moving, with oddly alert faces. But whether they are saints or villains, few people actually know. I shall lay the evidence before you and let you draw your own conclusions.

The Praying Mantis.

In attempting to form an opinion of human beings, it is not an unusual proceeding to ask who are their relatives. Applying this test, it will be found that the mantis is of an order of insects of which you already know a good deal. It is one of the straight-wings, the Orthoptera, and therefore a cousin to the grasshopper and the cockroach. The straight-wings, as you may remember, are divided into the jumpers and runners. The mantis is a runner, but comes near being in the snail class, since it moves so slowly. Speed in running is not a part of its rôle.

It practises the same sort of deception as does the grasshopper and takes on a greenish color that it may hide in the leaves. In South America there is a sort of mantis that is given to brilliant colors. This is that it may hide from its enemies in the beautiful orchid clusters with which the trees abound.

The mantis has a hinge in the middle of its body and the part in front of it has the appearance of a giraffe-like neck. Like all insects it has six legs. The hind legs are oddly developed in the grasshopper, the object being jumping, but in cousin mantis, it is the front legs that are peculiar. They are very long, so big as to be quite out of proportion to the rest of its body, and have two well-developed elbows with barbs inside to help in gripping whatever they may seize. It is these arms that constitute the business end of the mantis.

When the hinge bends in the middle, the front part of the mantis sits up straight. Then an odd thing is discovered. This mantis can turn its head about as can a human being and look from side to side. It is the only insect in the world that can do this. It almost has a face with an alert and wide-awake look upon it.

The grasshopper, the cricket, the katydid, the walking-stick, all relatives of the mantis, eat plants. The cockroach, living in the house with man, has learned to eat the master's food. But along comes this cousin and refuses to have aught to do with such tame bills of fare. It will eat, if you please, naught but raw meat.

If you watch this meek, slow-moving creature of religious mien on a shrub, or, if you are in South America, on an orchid, you will be likely to get one of the greatest surprizes of your life. Solemnly and slowly it may advance, like a minister in his pulpit, until it

has reached a point of vantage. Then it will rear itself, by dint of the hinges in its back, and lift its arms on high. There it will remain motionless as though in worship. Presently a katydid may fly past. Instantly there is a transformation. With lightning swiftness the mantis will strike with one of those poised arms. It will reach out a surprizing distance. When the arm comes back it will have in its elbow—with no danger of getting away, because of the barb—the struggling form of the katydid. Kick and strike as that creature may, it cannot break the clutch of the mantis' elbow. Without more ado, the latter sets about devouring the katydid.

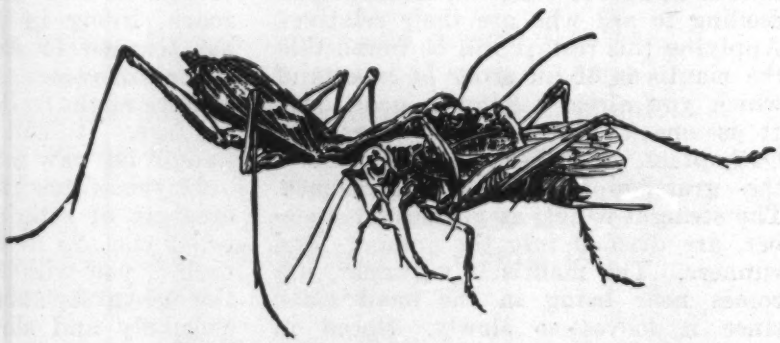
Upon occasion it is even more spectacular than this. The mantis may sit there on its leaf very still, as though in prayer. A grasshopper may approach innocently, little knowing the danger. It is yet beyond the reach of the mantis. Suddenly there is a transformation, a change in character that is surprizingly like that of Dr. Jekyll to Mr. Hyde. The pious mantis rises on tiptoe, flings out its wings, straightens up its body, stretches out its dangerous arms. It becomes a creature frightful to see, an ogre, a terror. The grasshopper comes to a halt. It stands as though spellbound. It is fascinated, charmed. The drive in those hopping legs, which might so easily take it out of danger, seems paralyzed. It may even approach the mantis or the mantis may slowly advance toward it. Soon it is within the range of those vises. A flash, and it is in the grip of the executioner. The grasshopper has met a tragic death.

This slow-moving creature is by way of being the monarch of the insect world. It is no respecter of persons and will tackle almost any other insect that comes its way. Bees, wasps, grasshoppers are its most frequent victims. Its appetite is most surprizing. One observer saw a mantis in one forenoon devour three grasshoppers, a grandaddy-long-legs, and then, horrible as was the spectacle, fall upon one of its own kind and proceed to eat it.

The mantis is a cannibal. It would as quickly eat another mantis as some other creature. They are much given to fighting among themselves. In Java and in China mantis fights are staged by the natives and they place bets on the results as do the Cubans on cock fights. The victor gets its pay by being allowed to devour the vanquished foe.

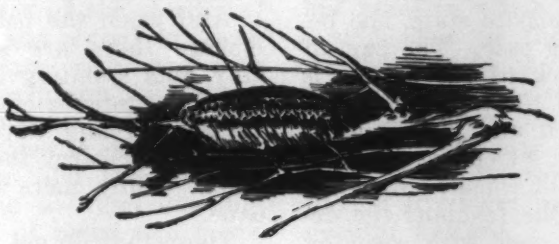
The prime crime of them all, in bloodthirstiness, however, is that committed by the female mantis on her mate. The females are larger and stronger than the males and, when the latter seem to have lost their usefulness and become unpopular about the place, the females eat them up.

This evidence pretty well does away with the theory that the mantis is a religious sort of person with any tendency to practise the Christian virtues. Yet there seems to be an element of sentiment in this harsh creature, a liking for the companionship of man and an understanding of his ways. The mantis may be tamed, may grow to be a pet. It adjusts itself, for instance, to being tied to the bed post by a silken thread. It learns to take its food from the hand of its master and may even be trained to stand guard for him against mosquitoes, snapping up any prowler that settles down on his hand for dinner.



The Female Mantis devouring her mate.

The belief of the negroes that the mantis is a "mule-killer" is based on the fact that it "makes molasses" or "spits tobacco juice," and this is supposed to be deadly. If the mantis is caught in the hand, for instance, a very dirty sort of liquid immediately begins to flow from its mouth. This liquid is not only messy in the extreme, but it has a bad odor. It is unpleasant to the captor. The mantis knows this. That is the reason it uses it. It hopes that, by making itself disagreeable, it may gain its release.



The Egg Case of the Praying Mantis.

This means of defense is rather pathetic when used by the mantis against so big a creature as man. Man would not be likely to be turned from his purpose by so mild a weapon. In the case of the other enemies of the mantis this defense may be more effective. Insect enemies are small and this liquid may gum up their legs and antennae and cause them much trouble. Insects also have much more delicate senses of smell than have human beings and the odor of this liquid may be quite impossible for them to endure. Thus it is an effective defense.

Other insects resort to this secretion of disagreeable liquids to drive their enemies away. Grasshoppers are notorious for the practise. The caterpillar of the milkweed butterfly thus makes itself distasteful as a food for birds. Even the cricket, when captured, gives out a bad smelling liquid from its abdomen. The oil beetle goes to the extreme of shedding drops of blood from the joints of its legs. This blood has an acid in it that is so strong that it may even make blisters on the fingers.

Many insects have these scent glands and use them in attempts to repel their enemies. It is the same principle as that employed by the skunk, but less highly developed. To be effective it does not need to be so highly developed, as the odor of a mantis is probably as offensive to another insect as the odor of a skunk is to its bigger animal enemies.

But aside from the rather mild unpleasantness of the liquid secreted by the mantis, it is entirely harmless. It certainly could have no effect upon that tough individual, the mule. Aside from this and a bit of pinching and clawing, the mantis has no power to injure whoever would capture it with his bare hand. It is a desperate fighter in the insect world, but capable of little resistance to larger creatures.

Anybody who has lived in the mantis country, all that region south of New Jersey, has seen its egg masses, though he may not have known what they were. Sticking about on twigs or tree trunks through the winter they may be found, an inch long, as big as a finger, yellow, and fluted somewhat to resemble heads of wheat. Down the middle of them are two rows of light colored eggs, so arranged as to give the appearance of a braid. It is an artistic, delicately sculptured creation, sticking there on the limb.

The making of this egg case is one of those remarkable examples of masonry in which the insect world abounds. It is made by the mother mantis, her mate not being there to do any of the work, since he was devoured by her some time earlier. She has never seen one of these clusters made, for the reason that her mother died half a year before she was born. But within her is embodied an instinct for its fashioning and, at the proper time, it will assert itself and she and all her kind, from Philadelphia to Buenos Aires, will set about this very specialized task and will make structures very much alike of a proved architectural design, and well fitted to the purposes they are to serve.

When egg-laying time comes, nature gives the mantis material with which to work. These are secreted from its body and are not unlike those from which the cook makes frosting for her cake. The mantis likewise has an egg-beater and works it most effectively. She develops a goodly quantity of froth. While this is still in the plastic state, she begins shaping her egg case. The part of the froth that is toward the bottom is heavier than that at the top. She skims the light material off and puts it aside for a special purpose. She makes the case, looking like a head of wheat, out of the heavier material. She fashions the design very exactly, yet with seeming carelessness, since she never even looks at her work. Then she places her eggs, some scores of them, like a braid of flaxen hair, down the middle. She covers them with the lighter material that she has kept in reserve. Her frosting, in contact with the air, gradually hardens. Soon it is as tough and rugged as the shell of an almond. The eggs have been put away for the winter.

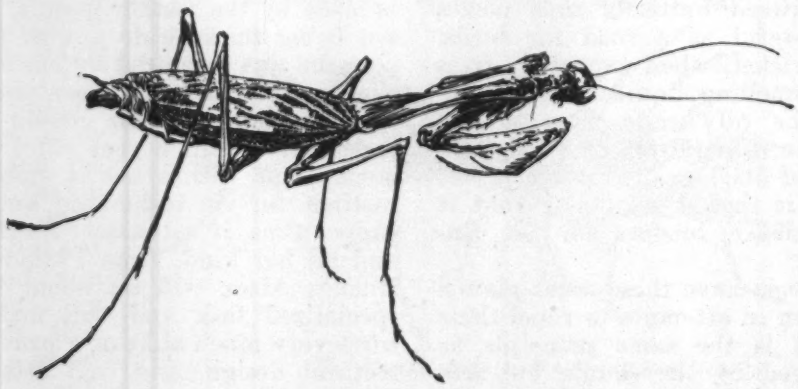
Nothing much happens until one bright day in the following June. Then of a sudden this egg cluster begins to come to life. Along the middle, where the lighter material was piled, a tiny creature with shockingly large eyes begins to show itself. Almost immediately scores of others appear. They work in squads. They are breaking through where the mother purposely made her structure weak.

There are perils, of course, for these tiny creatures. There is even a special chalcis fly that can penetrate the tough crust of the mantis' nest and deposit its egg within the egg of this sturdy builder. It devours the mantis grub. So it happens that some of the little ones that emerge are not mantis, but chalcis flies.

And when the baby mantes begin to emerge there are sometimes hosts of tiny ants standing in wait. They fall upon the new-hatched and helpless little fellows and devour them in great numbers or carry them off to their burrows. Many more are eaten than escape.

Those that do get away pass through one or two moults, develop a hardened crust, get their elbow pincers to work, begin on lesser insects like gnats and mosquitoes, and are soon lusty and aggressive. It is then that they turn the tables on the ants and the eaters become the eaten. It would seem that it might be that the massacre of their brothers and sisters, when they first appeared, had embittered the mantis, and that, through the rest of its life, it devoted itself to taking vengeance on the insect world.

Thus the testimony is produced that sets forth the life and character of the praying mantis. It would seem that the conclusion is bound to be that the creature is a hypocrite, is not the mild and benevolent sort of person that it seems to be. Instead of praying it is, in reality, lying in wait for whatever it may destroy. It is bloodthirsty,



greedy, murderous. It is a wolf in sheep's clothing, an insect ogre.

In the face of this evidence, one would be inclined to feel indignation and enmity toward the mantis. As compared with the friendly grasshopper, for instance, there would seem to be no choice. Who would not assert his friendship for the genial fiddler of the meadows?

Yet, when the ends served by these two insect cousins are considered with relation to their bearing on the welfare of man, the conclusion is quite the contrary. The grasshopper is man's enemy, since it holds over him the constant menace of becoming so numerous that it will eat him out of house and home. The mantis, on the contrary, is man's friend. It eats nothing that is useful to him. No matter how greatly the mantes multiply, they would be no menace to man. In fact, they are most helpful to him. They eat his enemies. They keep down the number of those insects that would destroy him. They are important in maintaining that balance in nature which makes of the world a pleasant place in which to live. They fight beside man in the unending contest which keeps in check the insect hordes that might otherwise overrun the world. They are stern warriors and so are their methods may be quite harrowing, but the results that come from their having lived are in the interest of the general welfare.

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THE SPACIOUS FIRMAMENT ON HIGH

Psalm XIX

The spacious firmament on high,
With all the blue ethereal sky,
And spangled heavens, a shining frame,
Their great Original proclaim.
The unwearied sun, from day to day,
Does his Creator's power display,
And publishes to every land
The work of an Almighty hand.

Soon as the evening shades prevail,
The moon takes up the wondrous tale,
And nightly to the listening earth
Repeats the story of her birth;
Whilst all the stars that round her burn,
And all the planets in their turn,
Confirm the tidings, as they roll,
And spread the truth from pole to pole.

What, though in solemn silence all
Move round the dark terrestrial ball;
What, though no real voice or sound
Amidst their radiant orbs be found;
In reason's ear they all rejoice,
And utter forth a glorious voice,
Forever singing, as they shine.
"The hand that made us is divine."

—*Joseph Addison.*

EARTH'S ONLY CHILD

By ARTHUR MEE

THE mind can hardly conceive that life has ever been upon the Moon, but as we look at this silent world, see with our own eyes the mighty record of its past, we feel a consciousness within us of the boundless mystery of the universe. We stand here on a world of life and look there on a world of death. Not a flower blooms, not a tree grows, not an insect creeps. Not a sound is heard, not a thing is moving; the silence of a thousand ages is unbroken in this solitude that no man knows.

But it was not always thus. The energies let loose in the Great War were like children's toys compared with the explosive forces that must once have rent and torn the Moon. Forces incalculable and unthinkable have made her what she is—beautiful to look upon as she rides with the Earth around the Sun, but with a face all scarred and worn with time, and the mark of some great agony written over it. Again and again I think of a note Professor J. A. Thomson sent to me one day from Aberdeen. We may say of the Moon, he said, that it was Earth's only child, and that it died. I can never forget now that the Earth has lost its only child.

And what a death the Moon must have died! We shall never know for certain, but it is thought that it wrenched itself away from the Earth; that, as the earth spun round, a more dense portion broke off and spun round independently, and for ages and ages went round the Sun side by side with the Earth, but slowly getting farther away, until at last it is where it is.

You cannot imagine the Moon breaking off the Earth. The mind reels to think of it. But it is all very likely. Millions of years ago, when the Earth was cooling down from its molten state and a crust about thirty miles thick was formed, there was probably a day when five thousand million cubic miles of matter broke away. That is how most men think the Moon began.

The breaking away of the Moon slowed down the Earth, for the Moon was pulling it all the time. The Moon revolved faster and faster, and wandered far away, but time has kept these two worlds together. The pull of the Earth on the Moon and the pull of the Moon on the Earth have never failed, and to-day they travel together and revolve together.

No atmosphere envelops the Moon, so that the Sun shines from a dense black sky. It would be like a great white ball shining in a pitch-black night. When the Sun withdraws its light and the Moon is wrapped in night, the darkness there must be as in the darkness of a pit. A day and a night on the Moon are equal to a month on Earth, so that for fourteen of our days a man on the Moon would live in light, and for fourteen days more in blackness and cold such as Earth never knows.

We can hardly think of a world like that as anything but dead, and if the Moon was born when the Earth was born we may ask why it has died so soon. Why is Earth still covered with green trees, and carpeted with flowers, and throbbing with the life of a myriad living things, while the Moon is dead and bare? It is because the Moon is smaller; the stupendous energies that spent themselves in the lunar world have been exhausted, and life, if ever life was there, has run its course.

Four sorts of worlds we know.

We know the nebula of Andromeda, a mighty mass of gas moving about the universe as the Earth once moved about.

We know the planet Jupiter, once like the nebula of Andromeda, but now

condensed into a liquid mass like a world of boiling metal, as the Earth once was.

We know the Earth itself, with its core still hot, but its surface fitted for life and enveloped in at atmosphere that makes life possible.

And we know the Moon, an extinct and barren world, a world of death, as the Earth may one day be.

Through these four stages every world must pass; the Earth is in the third and the Moon is in the fourth. All life and water and air have passed away, all sound has gone. No speech is possible; the Man on the Moon, if there were one, would be deaf and dumb, for sound depends on air, and air the Moon has none—or, if there should be any at all, it must be twice as thin as what we call a vacuum.

Weird and strange indeed are the scenes on this dead world, and it is one of the triumphs of the human mind that we know them well. Long before we knew the North Pole of the earth men knew the North Pole of the Moon. Men find their way about the Moon more easily than about the interior of Australia or parts of Africa. It was the first thing man began to study in the heavens. If it filled men with dread in ancient times, it gave them their first ideas of anything beyond this world and their first glimmering of the outer universe. The shepherds of Chaldea would sit and look at it, and think it a sort of mirror in which the image of the Earth reflected back, and after Calvary men thought they saw the figure of Judas in the Moon, suffering transportation for his treason to mankind. Long after that, wise men, looking at the Moon through telescopes, imagined that the marks they saw were made by men, as some men think to-day of the marks on Mars. Old Kepler used to think that these huge crater-walls on the Moon were built by men; they looked to him like the walls of pits built as shelters from the long, fierce action of the Sun. But Kepler did not know the nature of the things he saw—their vastness and their age. Let us look at the craters as he never saw them. A boy and girl to-day can see what Kepler and Galileo would have given their lives to see. We can see the Moon through a telescope that brings it as near as Mont Blanc seen from Lyons. There are telescopes that bring it within forty miles, and, as there is no atmosphere hiding the moon, the forty miles may be sometimes as thirty miles, or even less.

Is there anything more enthralling than a walk about the Moon? It is not a mere fancy, for we can see the way to go. We can fancy ourselves climbing up steep cliffs, and running through valleys, and roaming over hills. We can name the very places, we can find them on the map, we can watch the sunrise and the sunset, we can see the shadows stealing over the mountain peaks and trace them like church steeples for miles and miles and miles. We know how big they are, how steep they are, how deep they are. It is all like a miracle when we think what it means, for a thing on the Moon must be thirty miles wide to be seen as a pin-point with the naked eye on Earth; but the telescope *is* a miracle. It gives a man new eyes, eyes that take him to another world, so that many a man lives now who has traveled in imagination on the hills and valleys of the Moon more widely than upon the Earth. Men know the Alps on Earth, and many a man has seen a crater there who has never seen one here.

It is these craters that seize the imagination. They are the handwriting on the Moon. They are gigantic beyond anything seen on Earth, and the forces that made them are beyond our understanding. There are hundreds of them, and from some of them vast quantities of matter have been flung for over twenty miles. The walls rise sheer like walls of houses, but they fall away outside, and for a hundred miles at times we can trace the vast extent of those tremendous forces which flung up burning lava and molten streams from the furnace of the Moon. There is no doubt these craters are the remnants of

volcanoes, but to what can we compare the cataclysms which tore the heart of the Moon to pieces and left it yawning with chasms and stricken with death?

The Earth can hardly have known explosions to equal these. The Moon is thirteen times smaller than the Earth, and parted with its heat more quickly, and gravity there has only one-sixth of its force on Earth. Explosive forces on the Moon, therefore, would be six times as effective as on Earth. Everything on the Moon is very much lighter—a brick that weights six pounds here would weigh one pound there.

We can imagine, therefore, that those internal forces that seem almost to have torn the surface of the Moon to bits must have been beyond all human experience or conception; in parts the surface of the Moon is thick with craters, and rising from the floor of the craters we find enormous cones, standing like obelisks, sometimes a mile high, and sometimes with another crater in the cone, formed, no doubt, by the last expiring efforts of the eruption that built up the great circular walls. Some craters have cracks across that are quite a mile wide, and one great crater, over fifty miles across, is filled to the brim with lava, as if it oozed out, after the walls had been formed, until it filled the huge round pit with a mass of solid rock. It is believed that sometimes, in these explosions on the Moon, a single eruption may have sent forth, crashing out of the red-hot depths, a thousand cubic miles of matter. We read of a regiment of soldiers encamping in the crater of Vesuvius in the days before the destruction of Pompeii, but the whole of an English county could be contained in a crater of the Moon.

And as chasms are deeper and craters are wider, so mountains are higher on the Moon. A grain of mustard seed on a globe three feet across would represent the highest mountain on the Earth, but a grain of seed on a globe one foot wide would stand for the highest mountain on the Moon.. Cliffs on the Moon are much steeper than on Earth, and the mountain scenery, if we could see it as we see our Alps, would be far grander than our own. One mountain chain has three thousand mountains packed together. The range we call the Alps has seven hundred glorious peaks, and an immense wall eighty miles long and five miles wide that seems to have been cut out with a knife. Astronomers watch the sun rise on these peaks as travelers watch it rise in Switzerland, and the Apennine chain, reaching out four hundred and fifty miles, ends in a precipitous face which at sunrise throws a shadow for over eighty miles.

But more amazing than these mighty shadows are those white pathways that seem to creep wherever we look in the Moon. From one great crater we can trace them for a thousand miles. One is said to be seventeen hundred miles long, and they are sometimes twenty-five miles wide. They go over mountains and plains, over craters and through valleys, straight on everywhere, marching like the lemmings in those vast migrations which lead them in a straight line to the sea. Somebody has said that if a brush had been drawn across the face of the Moon in a thousand directions the effect would be to give us these white streaks, and they are among the mysteries of the lunar world. They are probably outflowings of lava through the great cracks around volcanoes, but the mind of astronomers is as much puzzled by them as by those enormous areas on the Moon which look like seas. They are not seas, for there is no water on the Moon. But perhaps these smooth surfaces—though what seems to us as smooth as water is actually broken in ridges and cracks extending for miles—may be due to the falling of the thin crust into the molten bed below, so that what we see may be the surface of a molten lake turned solid.

Such a world of stillness and mystery and death is this vast and shining solitude of the Moon. We have called it Earth's dead child, but we know that nothing can die and cease to be, and Earth's dead child has its glorious immortality.

THE LITTLE MAGAZINE

THE FIRST MUSICIAN

Translated from Kalewala, the Finnish Epic

By LAFCADIO HEARN

Out of the fir tree was formed the body of the kantele; out of the teeth of the pike fish were the screws wrought; and the strings were made of hairs from the black mane of the steed of Hiisi the magician — from the shining mane of the stallion of Hiisi, the herder of wolves and bears. . . .

AND the ancient and valiant Wainamoinen washed his thumbs; he purified his fingers; he seated himself by the sea upon the Stone of Joy, upon the Hillock of Silver, even at the summit of the Hill of God; and he took the instrument within his hands, and lifted up his voice, saying: "Let him that hath never heard the strong joy of runes, the sweet sound of instruments, the sound of music, come hither and hear!"

And the ancient Wainamoinen began to sing. Limpid his voice as the voice of running water, deep and clear, mighty and beautiful.

Lightly his fingers run over the strings of the kantele; and the kantele sang in answer—sang weirdly, sang wondrously, sang throbbingly, like the throats of a thousand birds. And its joy answered unto the joy of a singer; its song responded unto Wainamoinen's song.

All the living creatures of the forest, all the living creatures of air, drew nigh unto the runesinger, gathered themselves about the mighty chanter, that they might hear the suavity of his voice, that they might taste the sweetness of his song.

The gray wolves came from their lurking places, in the vast marshes; the bears deserted their dwellings under the roots of the firs, within the hollows of the giant pines; and they clambered over the hedges in their way, they broke down the obstacles before them. And the wolves mounted upon the heights, the bears upon the trees, while Wainamoinen called Joy into the world, while Wainamoinen sang his wondrous song.

The lord of the forest, also, the old man of the black beard—Knippana, king of the joyous woods; and all the followers of Tapio, god of wild creatures, came forth to hear, and were visible. Even the wife of the forest king, the goddess of savage beasts, the mistress of Tapiola, donned her raiment of red, and put on her azure stockings, and ascended a hollow birch that she might lend ear to the songs of the god.

All animals of the woods, all birds of the air, hurried to hear the marvelous art of the musician, hastened to taste the sweetness of his song.

The eagle descended from the clouds; the falcon clave the airs; the white gulls rose from the far sea marshes, the swans from the clear deeps of running water; the swift lark, the quick finch, the comely linnet, came to perch upon the shoulders of the god.

The Sun, bright virgin of the sky—the Sun, rich in her spendors—and the fair shining Moon, had paused in their paths; the first upon the luminous vault of heaven, the other upon the end of a long cloud. There were they weaving their subtle tissues of life—weaving with shuttle of gold, carding with carding comb of silver. Suddenly they heard the unknown voice of song—the

voice, mighty and sweet, of the rune-singer. And the shuttle of gold escaped from their hands, and the carding comb of silver slipped from their fingers, and the threads of their tissue were broken.

All animals living in the waters, all the thousand finned fishes of the deep, came to hear the voice of Wainamoinen, came to taste the sweetness of his song.

Swiftly came the salmon and the trout, the pikes also and the sea dogs; all the great fishes and all the little fishes swam toward the shore, and remained so high as they might remain, and lifted their heads to listen.

And Ahto, monarch of waters—Ahto, ancient as the ocean, and bearded with water weeds—arose upon his great water lily above the waves.

The fertile wife of the sea god was combing her hair with a comb of gold, and she heard the voice of the singer. And the comb fell from her hands; and she arose from the green abyss and approached the shore. There, leaning with her bosom upon the rock, she listened to the sounds of the kantele, mingling with the voice of Wainamoinen—so tender the sounds, so sweet the song.

All the heroes wept; the hardest of hearts were softened; there were none of all having never wept before who did not weep then.

The youths wept, the old men wept, the strong men wept, the virgins wept, the little infants wept, even Wainamoinen also felt the source of his own tears rising to overflow.

And soon his tears began to fall, outnumbering the wild berries of the hills, the heads of the swallows, the eggs of the fowls.

They streamed upon his cheeks, and from his cheeks they fell upon his knees, and from his knees they dropped upon his feet, and from his feet they rolled into the dust.

And his teardrops passed through his six garments of wool, his six girdles of gold, his seven robes of blue, his eight tunics all thickly woven.

And the tears of Wainamoinen flowed as a river, and became a river, and poured themselves to the shores of the sea, and precipitated themselves from the shores into the deeps of the abyss, into the region of black sands.

There did they blossom; there were they transformed into pearls—pearls destined for the crowns of kings, for the eternal joy of noblest heroes.

THE FOUR REFORMERS

FOUR reformers met under a bramble bush. They were all agreed the world must be changed. "We must abolish property," said one.

"We must abolish marriage," said the second.

"We must abolish God," said the third.

"I wish we could abolish work," said the fourth.

"Do not let us get beyond practical politics," said the first. "The first thing is to reduce men to a common level."

"The first thing," said the second, "is to give freedom to the sexes."

"The first thing," said the third, "is to find out how to do it."

"The first step," said the first, "is to abolish the Bible."

"The first thing," said the second, "is to abolish the laws."

"The first thing," said the third, "is to abolish mankind."

Robert Louis Stevenson.

ALIKE WITH A DIFFERENCE

A REMARKABLE, a romantic triumph of applied science was the saving of sericulture to France and the world. The meeting between Fabre and Pasteur to discuss the silkworm disease, in the following story, is whimsically and delightfully described, as are also the great Pasteur's faith in the applicability of his own scientific method to the solving of practical problems, and his lack of understanding of poverty's strictures.

Alike and yet how different were these two famous Frenchmen!

Louis Pasteur, the greatest benefactor France has ever possessed, and through France a benefactor of the human race, was born at Dole, December 27, 1822. His father was the strong influence in his life. Pasteur in after days said, "I owe everything to him. When I was young he kept me from bad company and instilled into me the habit of working and the example of the most loyal and best filled life. . . . And the touching part of his great affection for me is that it never was mixed with ambition. . . . He foresaw that advancement would mean hard work, perhaps detrimental to my health. And yet I am sure that some of the success in my scientific career must have filled him with joy and pride; his son! his name! the child he had guided and cherished! My dear father, how thankful I am that I could give him some satisfaction!"

While attending college Pasteur became intensely interested in chemistry. His was an inquiring mind, for those times strangely untrammeled by the pronouncements and theories of academic science. He was a keen seeker after facts, unwearied in his laboratory researches, precise, accurate, and observant in all experimentations.

Facts, isolated, studied, and weighed, were not mere fragments to Pasteur's constructive mind, but each was a forword step toward a basic understanding of science as a whole, and toward the ultimate control or amelioration of disease. Always when presenting his case, whether explaining his laboratory findings in regard to germs and prophylactics or whether combating the current belief in spontaneous generation and the Darwinian theory, Pasteur offered proofs gained through exhaustive researches.

"Let me tell you the signs by which a theory may be recognized as true," said Pasteur. "The characteristic of erroneous theories is that they can never produce new facts, and every time that a fact of this kind is discovered" —referring to some of his own findings in fermentations—"these theories are obliged, in order to account for it, to graft a new hypothesis onto the old one.

"The characteristic of true theories is, on the contrary, to be the expression of actual facts, to be ruled and dominated by them, to be able to foretell new facts with certainty, because they are naturally linked to the first; in a word, the characteristic of these theories is their fertility."

Referring to Michelet's ecstatic picturing of "the spontaneous appearance of the first beings of creation, which by slow progressive transformations can, in the course of thousands of years, rise to the dignity of man," Pasteur said, "Enough of poetry of this sort, enough of imaginary explanations. It is time that Science, the true method, reclaimed and exercised its rights."

Scientific, wise, humane, so tenderhearted that he suffered to see a child or animal in pain, self-sacrificing, risking his life continually in dangerous experiments with virulent germs of infectious diseases, a steadfast Christian, Pasteur labored on unceasingly for his beloved Country and Humanity. "God grant," said he, "that by my persevering labors I may bring a little stone to

the frail and ill-assured edifice of our knowledge of those deep mysteries of Life and Death, where all our intellects have so lamentably failed." And once when very ill he said sadly to a friend, "I am sorry to die, I should have liked to render further services to my Country." But God be praised! Pasteur lived to render powerful scientific services to both his Country and Humanity.

On a memorial tablet the City of Paris has recorded some of his benefactions: Fermentations (his findings relating to the fermentative and destructive action of living microscopic organisms); Spontaneous Generation (the results of his experiments to disprove the supposed generation of living things from non-living matter); Diseases of Wines and Beers; Diseases of Silkworms; Virus and Vaccines (and their disease-preventive effects in vaccination and inoculation); Prophylaxis against Rabies (the prevention of hydrophobia).

It is impossible in such short space to sum up satisfactorily the constructive and far-reaching effects of Pasteur's experimentations and discoveries. They revolutionized medicine and physiological chemistry. They ameliorated and prevented diseases, and saved untold human suffering. They pointed the way to further scientific findings based on exact experimentation and observation. They opened up vast vistas to seekers after knowledge, and filled sincere toiling scientists with hope. Even Lister, the father of modern antiseptic surgery, owned with deep gratitude his debt to Pasteur's laboratory researches.

Applied practically Pasteur's findings saved whole industries in France. When anthrax, that disease terrible to man and beast, was striking down thousands of sheep, it was Pasteur's investigations and studies that saved the sheep industry. So it was when the chicken cholera was devastating the farms of France.

It was, however, a strange disease which was threatening the sericulture of France and the world, that brought Pasteur to Fabre's humble home. In 1865 an epidemic was destroying the silkworm industry. French sericulture had "prospered from the Imperial Epoch until the reign of Louis Philippe," writes Vallery-Radot, "to such an extent as to reach in one year a total of 20,000,000 kilogrammes of cocoons, representing 100,000,000 francs. The name of the Tree of Gold, given to the mulberry, had never been better reserved. Suddenly all these riches fell away. A mysterious disease was destroying the nurseries."

"Eggs, worms, chrysalides, moths, the disease may manifest itself in all the organs," wrote Jean Baptiste Dumas, the distinguished French chemist. "Whence does it come? How is it contracted? No one knows." And Dumas urged Pasteur to undertake the study of the disease and save sericulture to France. Not only France's industry was suffering, but the same silkworm disease was appearing in other parts of the world. "Your proposition," wrote Pasteur, "throws me into a great perplexity. . . . Remember, if you please, that I have never even touched a silkworm."

"A traveler coming back to the Cévennes Mountains, after an absence of fifteen years," wrote Pasteur later, "would be saddened to see the change wrought in that countryside within such a short time. Formerly he might have seen robust men breaking up the rock to build terraces against the side and up to the summit of each mountain; then planting mulberry trees on these terraces. These men, in spite of their hard work, were then bright and happy, for ease and contentment reigned in their homes.

"Now the mulberry plantations are abandoned, the 'Golden Tree' no longer enriches the country; faces once beaming with health and good humor are now sad and drawn. Distress and hunger have succeeded to comfort and happiness." And it was to this sorrowful and perplexing condition that Pasteur began at once to apply principles of scientific investigation. After

long and arduous studies and experiments with cocoons, moths, and silkworms, he discovered the cause of the disease and its control. Happiness and wealth returned once more to the families in the Cévennes Mountains, as well as to the people in other parts of the world, where the silkworm disease was working havoc.

Now let us enter with the great Pasteur the little home of the impecunious, shy, reserved university professor, Jean-Henri Fabre, and listen while they discuss the silkworm disease. For a moment we will pause to contemplate with tender sympathy Fabre, the enthusiastic entomologist, the poet-scientist of nature, devoted, sincere, so like the great Pasteur in his painstaking, cautious approach to science, yet in other matters so different!

In the small commune of Saint-Leon, on the 22nd of December, 1823, one year after the birth of Pasteur, Jean-Henri Fabre first saw the light. "As far back as he can remember," writes his biographer, Dr. Legros, "he sees himself in ecstasy before the splendors of the wing-cases of a gardener beetle, or the wings of a butterfly. At nightfall among the bushes he learned to recognize the chirp of the grasshopper. . . . The riches of the rocks; the life which swarms in the depth of the waters; the world of plants and animals; that 'prodigious poem'—all nature—filled him with curiosity and wonder. 'A voice charmed him, untranslatable, sweeter than language and vague as a dream.' . . . In the roads of Malaval, bordered with brambles, in the glades of bracken, and amid the meadows of broom, he received his first impressions of nature. At Malaval, too, lived his grandmother, the good old woman who could lull him to sleep at nights with beautiful stories and simple legends, while she wound her distaff or span her bobbin. . . . Above all things he was born a poet, a poet by instinct and by vocation."

But the poet after arduous studies and labors became the scientist, the close student of nature, the observer and recorder of the habits and the exquisitely complex beauties and strange caprices of nature's seemingly most insignificant children. But Fabre, with delicate sympathy and the charm of a poet, yet with scientific exactitude, has revealed to us in his many books the secrets of that marvelous, colorful insect-world, as well as other intimate mysteries of God's creation. Says Dr. Legros:

"Fabre will suppose nothing. He will only record the facts. Instead of wandering in the region of probabilities, he prefers to confine himself to the reality, and for the rest to reply simply, 'We do not know.' This stern, positive, rigorous, independent, and observant mind, nourished upon geometry and the exact sciences, which has never been able to content itself with approximation and probabilities, could but distrust the seduction of hypotheses."

And what a picturesque figure is the Fabre shown us by Dr. Legros, though a Fabre of more mature years than when he met Pasteur—"A peasant face stamped with originality, under the wide felt hat of Provence; touched with genility and benevolence, yet reflecting a world of energy. . . . This strange mask, the thin cheeks, ploughed into deep furrows, the strained nose, the pendent wrinkles of the throat, the thin shriveled lips, with an indescribable fold of bitterness at the corners of the mouth. The hair, tossed back, falls in fine curls over the ears, revealing a high, rounded forehead, obstinate and full of thought. . . . The surprizing shrewdness of that gaze, eclipsed from time to time by a conclusive movement of the eyelids! What Holbein, what Chardin, could render the almost extraordinary brilliance of those black eyes, those dilated pupils; the eyes of a prophet, a seer, singularly wide and deep set, as though gazing always upon the mastery of things, as though made expressly to scrutinize Nature and decipher her enigmas? Above the orbits, two short bristling eyebrows seem set there to guide the vision; one, by dint of knitting itself above the magnifying

glass, has retained an indelible fold of continual attention. Such is this striking physiognomy!"

And such was Fabre, though a much younger man, when sought out by the great Pasteur "in order to obtain from his store of entomological wisdom the elementary ideas, which he, Pasteur, would find indispensable," during his studies of silkworms. Let us now listen to them converse, the two scientists, both intent on saving the silkworm industry for their country; Pasteur gentle, calm, poised, used to mingling with men, the unspoiled recognized scientist, completely enwrapped in his investigations; the other, Fabre, the poverty-stricken, sensitive recluse, with feelings easily injured, who was not as yet the darling of fame.

Let us hear the great Pasteur ask him, where is his wine cellar!

A Visit From Pasteur

UNEXPECTEDLY, one fine day (writes Fabre) Pasteur rang my door-bell: the Pasteur who was presently to acquire so great a celebrity. His name was known to me. I had read his beautiful essay on the dissymmetry of tartaric acid; I had followed with the keenest interest his researches concerning the generation of the Infusoria.

Every period has its scientific craze; to-day it is evolution; then it was spontaneous generation. By his glass bulbs, made sterile or fertile at will, by his experiments, magnificent in their rigorous simplicity, Pasteur exploded forever the insanity which professed to see life arising from a chemical conflict in a mass of putrescence.

Aware of this dispute, so victoriously elucidated, I gave my illustrious visitor the best of welcomes. The scientist had come to me in the first place for certain information. I owed this notable honor to my quality of colleague as a teacher of physics and chemistry. Ah, but what a humble, obscure colleague!

Pasteur's tour through the district of Avignon was in connection with sericulture. For some years the silk-worm nurseries had been at sixes and sevens, ravaged by unknown plagues. The silkworms, without appreciable cause, became masses of putrid deliquescence, or hardened into stony lumps. The peasant, in dismay, saw one of his chief sources of income disappearing; after much expense and trouble he had to throw his litters on the dungheap.

A few words were exchanged concerning the prevailing evil; then, without further preamble:

"I wanted to see some cocoons," said my visitor; "I have never seen any; I know them only by name. Could you get me some?"

"Nothing simpler. My landlord is himself a dealer in cocoons, and he lives across the road. If you'll be good enough to wait a moment, I will bring you what you want."

A few long strides and I had reached my neighbour's house, where I stuffed my pockets with cocoons. On my return I offered them to the scientist. He took one, turned it over and over in his fingers; curiously he examined it, as we should some singular object which had come from the other end of the world. He shook it against his ear.

"It rattles!" he said, quite surprized. "There is something inside!"

"Why, yes!"

"But what?"

"The chrysalis."

"What's that, the chrysalis?"

"I mean the sort of mummy into which the caterpillar turns before it becomes a moth."

"And in every cocoon there is one of those things?"

"Of course; it's to protect the chrysalis that the caterpillar spins."

"Ah!"

And without more ado, the cocoons went into the pocket of the scientist, who was to inform himself at leisure

concerning this great novelty, the chrysalis. This magnificent assurance impressed me. Knowing nothing of caterpillar, cocoon, chrysalis, or metamorphosis, Pasteur had come to regenerate the silkworm. The ancient gymnasts presented themselves naked for the contest. This ingenious thinker, who was to fight the plague of the silk-worm nurseries, had also hastened to battle wholly naked: that is, devoid of the simplest notions of the insect he was to save from danger. I was astounded; more, I was filled with wonder.—*From Souvenirs.*

The fact, so extraordinary that it may well appear incredible, receives authentic confirmation from the wholly concordant account of Duclaux, Pasteur's pupil and historiographer, as well as from the honesty of the naturalist, who is assuredly incapable of having invented the story for our amusement.

I still remember the day (says Duclaux) when Pasteur, returning to the laboratory, said to me with a touch of excitement in his voice:

"Do you know what M. Dumas has just asked of me? To go to the Midi, to study the silk-worm disease."

I don't know what I replied; probably what he himself replied to his illustrious master: Then there is a silk-worm disease? There are provinces that are being ruined by it? All this was happening so far from Paris, and we were so far from Paris in the laboratory! . . .

Pasteur hesitated. He was not a physiologist. But Dumas' insistence, the attraction of the unknown, and an inward voice urged him to accept. So he left for the Midi; it was early in June, 1865. He was invested with an official mission which confronted him with a plague that had to be conquered and obliged him to render an account of the attempts made and the results obtained.

To be sent to fight a fire and not to know what fire is and to have no fire-engine or hose! It needed Pasteur to accept and to shoulder such a responsibility! . . . To his complaint that he had no knowledge of the matter, Dumas had replied:

"So much the better! You will have no ideas on the subject but those that will come to you as a result of your own observations!"

This reply is not always a paradox, but one has to be careful to whom one makes it!—*From Histoire d'un Esprit, by Duclaux.*

In this case the choice was not mistaken, and the lesson was as profitable to Pasteur as it was to Fabre, to whom he was about to hand it on, all unsuspecting.

When Pasteur was called upon to regenerate sericulture, the silk-worm disease had been known for twenty years. During that period much research had been undertaken and many efforts had been made, in France as well as in Italy, to discover the nature of the affection and to fight it. But "of all this story, a mixture of truth and falsehood, Pasteur knew nothing when he began his researches." More—and this was what astonished Fabre—he knew nothing of the physiology or the rearing of the silk-worm. "For the first time he has seen a cocoon, and has learned that there is something in the cocoon, a rough model of the future moth," . . . and he is about to revolutionize the hygiene and the silk-worm nurseries and is preparing to revolutionize medicine and general hygiene in the same way, by showing that the maladies of silk-worms, and most of our human maladies, arise from the development in the tissues of a microscopic living entity, a microbe, the cause of the malady. And while his other discoveries won for him only fame and the admiration of his contemporaries, this will give him immortality and place him in the front rank of the benefactors of humanity. Decidedly ignorance may have its advantages.

Encouraged by the magnificent example of Pasteur (continues Fabre) I have

made it a rule to adopt the method of ignorance in my investigations of the instincts. I read very little. Instead of turning over the leaves of books, an expensive method which is not within my means; instead of consulting others, I set myself obstinately face to face with my subject until I contrive to make it speak. I know nothing. So much the better; my interrogation will be all the freer, to-day tending in one direction, to-morrow in another, according to the information acquired. And if by chance I do open a book, I am careful to leave a section of my mind wide open to doubt.—*From Souvenirs.*

Beginning with that arising out of Dufour's memoir, repeated experiences taught Fabre not to be too greatly influenced, in his conceptions of natural objects, by faith in his reading or even in the assertions of his masters. To go still further, Pasteur's example made him appreciate the advantage of coming fresh to the facts, of confronting them in a state of ignorance, of receiving impressions from them alone, and of having no ideas but those that truly emanate from the reality.

Without going to extremes, Fabre benefited by this twofold lesson. No one had a greater respect for his masters; he quotes them readily and is never chary of praising their works; but no one was ever more independent in his researches and his conclusions, which are often the very contrary of theirs. If he revered his masters he revered the truth still more, and he might well have made his own the celebrated maxim: *Amicus Plato, magis amica veritas.*

Let us add that while no one was ever more interested in authors and their writings, to purchase which he often sacrificed his last coppers, and even his daily bread, no one was more resolutely determined to give first place to the language of facts, and to direct intercourse with the tiny living creatures whom he had chosen for his own. So much that, if we wish fully to describe his method, we must complete the maxim which we have just quoted by this other, which forms its exact counterpart: *Amicus liber, magis amica natura.*

When Pasteur called upon Fabre, at the beginning of his investigation of the silk-growing industry, he was greatly interested in the improvement of wines by the application of heat.

Everybody knows to-day that heat kills, or so far enfeebles as to render inoffensive, the microbes that infect liquids and make it impossible to preserve them.

This again is one of Pasteur's happy discoveries, as is conveyed by the very verb *to Pasteurize,* which means to "protect against microbes by the action of heat." We Pasteurize milk, beer, wine, etc.

The ancients used to practise the heating of wines. In the house of St. John and St. Paul, discovered in Rome in 1887, beneath the church dedicated to the two martyrs, who were both officers of the Emperor Constantine, the excavators found beside the cellar and the amphorae of wine, the little room with a fireplace known as the *furnarium,* which was used for heating wine and drying fruit. The heating of wines was practised also at Meze, near Cette, before Pasteur's discovery.

But the ancient method of heating had nothing in common with Pasteurization. The merchants of Herault, like the ancients, used to heat wine, in order to modify its flavor, to mature it more quickly. Pasteur, on the other hand, heats it to keep it unchanged. To mature wine it is heated slowly in contact with the air. To preserve it, the wine must be rapidly heated to 122° F. in a vacuum. The object and the method are altogether different.

While Pasteur was gleaning facts about the silk-worm from the Avignon naturalist, he suddenly asked him to show him his cellar. Fabre found the request extremely embarrassing:

To show him my cellar! My private cellar! And I, poor wretch, but a while ago, with my preposterous professor's salary, could not even permit

myself the expense of a drop of wine, so that I used to make myself a sort of rough cider, by placing in a jar, to ferment, a handful of brown sugar and some grated apples! My cellar! Show him my cellar! Why not my tuns of wine, my dusty bottle, labeled according to age and vintage! My cellar!

Completely confused, I tried to evade his request, to change the subject. But he was tenacious.

"Show me your cellar, I beg you."

There was no possibility of resisting such insistence.

With my finger I pointed to a corner of the kitchen where there was a chair without a seat, and on the chair a demijohn holding a couple of gallons.

"There's my cellar, monsieur!"

"Your cellar? That?"

"I have no other."

"That's all?"

"Alas, yes. That's all!"

"Ah!"

Not a word more from the scientist. Pasteur, it was easy to see, knew nothing of those highly-flavored dishes which the common people call *la vache enragée*. If my cellar, that is the old chair and the hollow-sounding demijohn, had nothing to tell concerning the ferments to be fought by means of heat, it spoke very eloquently of another subject, which my illustrious visitor did not appear to understand. One microbe evaded him, and it was one of the most terrible; the microbe of misfortune strangling good will.—*From Souvenirs.*

CHILD AND MOTHER

O Mother-My-Love, if you'll give me your hand,
And go where I ask you to wander,
I will lead you away to a beautiful land —
The Dreamland that's waiting out yonder.
We'll walk in a sweet posie garden out there
Where moonlight and starlight are streaming,
And the flowers and birds are filling the air
With fragrance and music of dreaming.

There'll be no little tired-out boy to undress,
No questions or cares to perplex you;
There'll be no little bruises or bumps to caress,
Nor patching of stockings to vex you.
For I'll rock you away on a silver-dew stream,
And sing you asleep when you're weary,
And no one shall know of our beautiful dream
But you and your own little dearie.

And when I am tired I'll nestle my head
In the bosom that's soothed me so often,
And the wide-awake stars shall sing in my stead
A song which our dreaming shall soften.
So Mother-my-Love, let me take your dear hand,
And away through the starlight we'll wander —
Away through the mist to the beautiful land —
The Dreamland that's waiting out yonder!

— *Eugene Field*

The Life of Judge Gary

(*Continued from page* 450)

fore we went into the War.

The high earnings of the Corporation in the War were shared with both stockholders and labor. Holders of steel common have never been too highly rewarded for their faith. Up to 1916 there had been three years in which the dividends had been entirely passed, and there had been other years in which the 5 per cent. on common, which the Corporation has always aimed to pay, had been cut to 4, 3, and 1½ per cent. Then, in 1916, dividends of 7 per cent. were paid; in 1917, of 16¾ per cent; in 1918, of 16 per cent. Since then they have fallen back to the peace rate of 5 per cent., though since December, 1923, an extra 2 per cent. has been paid.

Labor's average rose with the boom, the rise being voluntary. In 1915, the average wage and salary per man was $925; two years later, $1,280; in 1920, $2,173. It has been receding since, and in 1924 the average per day for the year was $5.74 exclusive of the administrative and selling forces. With these forces they were $5.85 per day. Altogether, the most heartening thing about a study of the financial conduct of the Steel Corporation is the steady improvement it shows in the earnings of workers.

The great economies in the Corporation have come through its organization as was promised at the start. These are economies of integration. They are written on the face of the organization and its practises. There is the saving which comes in the moving of materials, raw, semi-finished, and finished. To be near your base and where transportation is cheap and easy is a governing principle of the Corporation. It owns and controls much of its transportation, thus avoiding the delays that come from congested traffic, undersupply of cars, side-tracking because of the priority of perishable freights Owning their transportation, they are able to lay in supplies against the interruptions the seasons bring, as in getting ore down from the Lake Superior region where for many months the lakes are closed by ice.

The smooth and continuous operation that comes from controlling supplies is a great economy as is the ability to carry the hot steel from the producing mill to the finishing mill.

And then savings have come from the utilization of what were once waste products. The immense Portland cement industry of the Steel Corporation, one of its big money earners, has been built on furnace slag, once not only a waste but an expense to dispose of. Portland cement has become a great business, but there are many small businesses which have grown up, such as one in China, based on steel and iron junk. "The Chinese buy large quantities of discarded material," says Mr. Farrel, "defectives, we call them—defective wire, rods, defective nails, defective shapes. It is the great market for defective material. They shape these things up into various articles in a very clever and commendable way. They make a very good razor from a low carbon steel wire rod. They even buy old horseshoes."

This of course would have been impossible without large cash resources. Judge Gary says that one of the chief elements in effecting large economies has come from their money reserves. "The money we have in banks," he says, "which can be utilized from time to time at one point or another as necessities may require, enables us to get along with one-half the cash that these companies, if separated, would require for carrying on their businesses successfully." The policy of keeping a great working capital makes it possible for them, too, to apply the new methods, processes, inventions which come out of the policy of keeping a large number of men in friendly competition. This friendly rivalry is in itself one of the substantial economies of the Steel Corporation. Mr. Schwab gave an example of this in the steel suit. "One of the things we did," he said, "was to send to each blast furnace manager each month the cost of each one of the hundred furnaces in the Steel Corporation, or ninety, to be accurate, putting the best furnace at the top, with the name

of the manager and the conditions, and the worst at the bottom, with the name of the manager and the conditions, for the education and stimulation of the other managers. The result of this was that the first year we made a saving in that department along of approximately $4,000,000."

In Judge Gary's judgment, one of the most important economies from large cash resources is that it enables them to provide workers with plant and living conditions which would be out of the question under other circumstances. He believes that there is not only a moral obligation on the Corporation to use its funds liberally for the benefit of labor, but that it is the soundest of economic practises.

Perhaps nothing better proves Judge Gary's unique qualities as a leader than the building up of the Iron and Steel Institute. Twice a year this body holds a meeting of from 1,200 to 1,500 men, and it is a remarkable fact that every man of them will be in his seat in the assembly hall to listen to Judge Gary's business forecast. Many of them have come to regard what he has to say as almost prophetic, but he claims no prophetic powers. He is an inveterate optimist in regard to American business, basing his faith on the country's fundamental resources. Depression never scares him, never shakes his faith. That is, he is no opportunist in business, and this steadiness and farsightedness has had for years now an extraordinary effect on this great group.

His associates all remark his interest in new knowledge, also his insistence that it be sound. "Are you guessing?" he will ask a man that reports something to him. "If so, I can guess as well as you can." "You will learn," one of them remarked, "never to go to him with anything unless you have learned all you can about it. He senses whether a man knows what he is talking about or not."

Mr. Lindabury, who for many years was general counsel and a member of the finance committee, considered his willingness to listen to other men, to listen to opposite views, most unusual. "He is the only man of his class that I have known that has this characteristic," Mr. Lindabury told me once. "I

(*Continued on page* 478)

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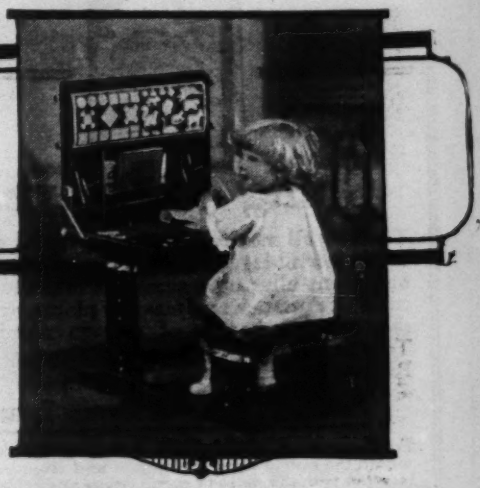

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(*Continued from page* 475)

have known John D. Rockefeller, Sr., the elder Morgan, Jim Hill, well—had business dealings with them—all of them were intolerant of opposing opinions—intolerant of those about them—expected to be agreed with. Judge Gary is never intolerant. He seeks the opinions of associates, listens to everybody. His mind is clear on what he thinks, but he is kindly toward those who oppose him in business, and he gives up when there is a majority against him, in a good-tempered and friendly fashion."

This tolerance has been marked in his dealing with public criticism of the Steel Corporation's practises and policies. Judge Gary has been bitterly assailed again and again for upholding what he was trying to remove, and many of his associates, knowing his efforts and his difficulties, have resented the attitude of his critics. His care, however, has been always to find out if there was anything in what they were saying—how far they really represented public opinion. If their accusations were false or ignorant, you could afford to disregard them, but if there was anything that was true and essential, then it was your business to heed it. "Have no fear of unworthy criticisms," he told his colleagues once, "and entertain no unjust prejudice."

Again, Judge Gary is a likable man, approachable, interested in everybody's problems. His personal qualities have made him acceptable when, if he had been dictatorial or pompous, self-seeking or vain, he would have made far less headway than he has. It is not that in the ease of approach he forgets his dignity. Indeed, he seems to have a very strong sense that it is due to the Corporation and to the iron and steel industry that he set a good example.

His pride in the steel industry has made his leadership particularly acceptable. Judge Gary is a man of fine loyalty—and something of a hero worshipper! His feeling for Roosevelt amounts to that. The Judge knew Roosevelt at his greatest moment—backed him in his attack on corporate crime, and never lost the elation of the fight. He would, I think, have liked to have seen Roosevelt back in the White House. It may be that this was in his

mind when in December of 1915 he gave a great, but strictly private, dinner, all the great financiers of the day being invited to meet the ex-President. It leaked out a few days later, and the newspapers were filled with speculations, much to T. R.'s enjoyment.

This loyalty of his has been a large factor in holding the men of the iron and steel world to him in the trying circumstances which have surrounded their industry through the last twenty-five years. Colleagues and competitors knew that he never lost sight of his responsibility to them—never failed to interpret *their* point of view, though often, as they knew, it was not *his* point of view. They had their side, they were the men upon whom the burden of production lay—they must stand the vicissitudes. Whatever their mistakes, their differences, Judge Gary did his best to present them fairly to the public. They came to know that they were safe in his hands—that he would never betray them. They also knew that he was incessantly working to convert them! Sooner or later they realized that he was leading them to the water, though they knew he would not try to force them to drink until they were ready.

It was difficult for a considerable progressive element in the public to realize his strategy, to understand that probably he was moving as rapidly on the whole as was possible, and keep the line he led unbroken. He was not infrequently pelted with criticisms which were undeserved and which cut him deeply but which, because of his object—which was that of his critics—he passed without reply.

Judge Gary's leadership in the iron and steel world is the logical result of a combination of fine qualities unwaveringly applied for twenty-five years to realizing a body of principles and policies always ahead of his day. He has demonstrated in practise the soundness of his code. He has made a lasting contribution to our difficult and often baffling problem of substituting in American business balance for instability—mutual interest for militarism—cooperation for defiance—frankness for secrecy—good will for distrust. No man in contemporary affairs has more honestly earned the high title of Industrial Statesman. THE END.

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